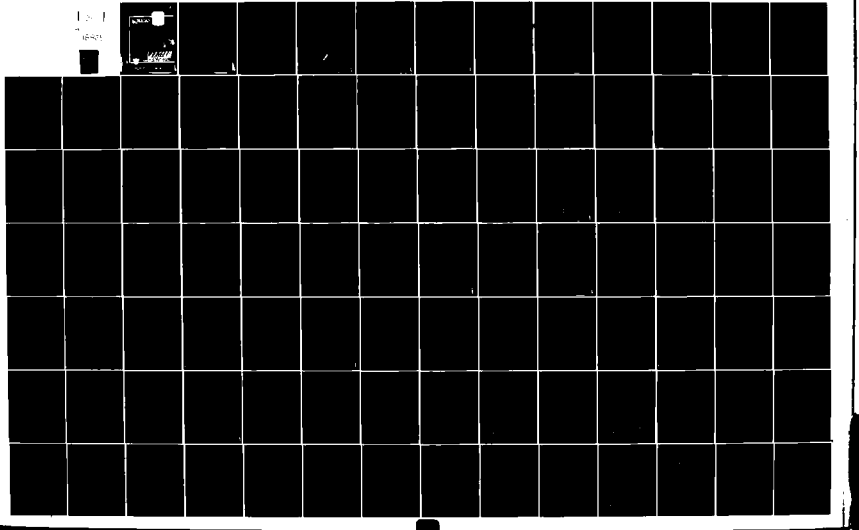
AD-A118 835 ARMY WAR COLL CARLISLE BARRACKS PA F/G 15/7
MILITARISM AND FOREIGN CONFLICT BEHAVIOR: A QUANTITATIVE STUDY --ETC(U)
MAY 82 D G HANSEN

UNCLASSIFIED NL



[redacted]

MAY 1982

RELIGION AND FOREIGN CONFLICT BEHAVIOR: A QUANTITATIVE STUDY REVISITED

by

LIEUTENANT COLONEL WAYNE G. HARRIS

[redacted]

[redacted]

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A118835
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE *(and Subtitle)* Militarism and Foreign Conflict Behavior: A Quantitative Study Revisited	5. TYPE OF REPORT & PERIOD COVERED Study Project
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) David G. Hansen, LTC	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army War College Carlisle Barracks, PA 17013	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Same	12. REPORT DATE 20 May 1982
	13. NUMBER OF PAGES 85
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)*	15. SECURITY CLASS. *(of this report)* Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

Political

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

Considerable information has been written about the phenomenon known as militarism; however, little or no quantitative research has been used to investigate it. This study surveyed the ~~p~~olitical, cultural and economic qualities of nations and used seven 1978 indicators to profile the militaristic nature of 139 nations in 1978 and 1979. Since the study's thesis is that nations characterized as militaristic will act more aggressively in their foreign conduct, conflict behavior

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

Item 20. (Continued)

for these same nations is ascertained and the results manipulated by various statistical techniques. It was found that militarism can best be understood by the economic and social attributes of a nation since the political variables correlated very poorly with foreign conflict. Although an attempt was made to predict future conflict, the results were not conclusive. Concluding observations include that militarism can be quantified and with the use of computer models, future foreign conflict can be determined for certain nations. The results are encouraging, but mixed, and further quantitative research into the mystery of militarism is warranted.

US ARMY WAR COLLEGE

MILITARY STUDIES PROGRAM PAPER

MILITARISM AND FOREIGN CONFLICT BEHAVIOR: A QUANTITATIVE STUDY REVISITED

BY

LIEUTENANT COLONEL DAVID G. HANSEN

29 MAY 1982

AUTHOR: David G. Hansen, LTC, AD

TITLE: Militarism and Foreign Conflict Behavior: A Quantitative Study Revisited

FORMAT: Individual Military Study Project

DATE: 20 May 1982 PAGES: 85 CLASSIFICATION: Unclassified

Considerable information has been written about the phenomenon known as militarism; however, little or no quantitative research has been used to investigate it. This study surveyed the political, cultural and economic qualities of nations and used seven 1978 indicators to profile the militaristic nature of 139 nations in 1978 and 1979. Since the study's thesis is that nations characterized as militaristic will act more aggressively in their foreign conduct, conflict behavior for these same nations is ascertained and the results manipulated by various statistical techniques. It was found that militarism can best be understood by the economic and social attributes of a nation since the political variables correlated very poorly with foreign conflict. Although an attempt was made to predict future conflict, the results were not conclusive. Concluding observations include that militarism can be quantified and with the use of computer models, future foreign conflict can be determined for certain nations. The results are encouraging, but mixed, and further quantitative research into the mystery of militarism is warranted.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

This Military Study Project was produced under the aegis of the US Army War College. The author, however, was given free run to pursue his study as the research directed. The subject, militarism, was selected because of the author's interest in the matter and his original research in militarism and foreign conflict behavior which culminated in an M.A. thesis in 1972. The present Study updates, enlarges upon, and supplements that preliminary effort. The superb cooperation and assistance of the Carlisle Barracks Computer Center aided significantly in the timeliness and thoroughness of the research effort.

CHAPTER 1

INTRODUCTION

Concerned authors have, for a number of years, represented "militarism" as an oppressive, fearful force which is eliminating hope of peaceful existence in the world. Despite the use, militarism is not an easily defined word. A review of the literature reveals fewer definitions of the term than variants of its use. Perhaps this can be explained by Skjelsbaek's observation that,

> Although a universal definition of militarism is likely to be meaningless, this does not render the term totally without heuristic and scientific value. Many terms frequently used by social scientists do not meet the criteria of having universally meaningful definitions. They have survived nevertheless because they are indispensable. The term militarism belongs to this category. It serves a function by pointing to the propensity of the military for creating problems and causing damage. It can be used as a general reference to these phenomena just as the word cancer is applied to a number of different but related diseases.[1] (Emphasis in original)

Skjelsbaek's illustrative use of the word cancer is not unique and such word imagery is frequently found in militarism literature. For example, "ours is a sick society. One symptom of the sickness is the spread of militarism and militarization around the globe."[2] The same author also writes that,

> Any sickness, even when of a social nature, will hit hardest the weak and the feeble. This is indeed the case with militarism and militarization. Like a contagious disease, military regimes have spread in the Third World.[3]

But this condemnation of militarism is not a recent phenomena. In 1907,

Karl Liebknecht wrote:

> Militarism weighs like a lead on our whole life; but is is especially an economic weight, an incubus under which our economic life groans, a vampire which constantly, year after year, sucks its blood by withdrawing from the work of production and culture the best strength of a nation, and by incurring insane direct expenditure.[4] (Emphasis in original)

Thus militarism has been the subject of controversy for a long time. Yet, inspite of the rhetoric, little research has been conducted to define or operationalize the term so as to make it meaningful to social scientists. Often it is simply explained by reference to size of armies. However, this notion is too simplistic. Woodrow Wilson asserted in 1916 that militarism does not consist of

> any Army, nor even in the existence of a very great Army. Militarism is a spirit. It is a point of view. It is a purpose. The purpose of militarism is to use armies for aggression.[5]

It has long been this writer's contention that militarism was too elusive a term to be credited with so many evils. While doing research on militarism in 1971-1972,[6] it was discovered that although many had written regarding militarism, no one had tried to conceptualize it in such a manner as to make it useful to researchers. Therefore, it seems that the concept is important but there have been no published efforts to quantify it or attempt, through the use of empirical research, to validate the assertions leveled against it. There have been numerous historical assessments of international activities which have been coupled with a surmise that a nation responded in a certain manner because of militarism. But attempts to define the word "militarism" and operationalize it so that commonly held assumptions can be tested have not been made. The truths do not appear to be so self-evident that verification, through the use of quantification is not necessary.

Beginning with the 1971-1972 research mentioned above, (hereafter called the 1972 study) and continuing with the present effort, an attempt is being made to provide the basis for examining the concept of militarism and the oft-supposed proposition that militarism leads to war. This is not to say that efforts have not been made to compare the nature of governments and foreign conflict. In an exhaustive book compiling the work of political science researchers, McGowan and Shapiro have reviewed the findings of empirical research in the field of comparative foreign policy.[7] They have grouped studies under various "propositions" of which three are germane to this investigation. The first, proposition 26, states that there is no correlation between the degrees of democracy of a nation and violent foreign conflict behavior. This is supported by Rummel (1968), Weede (1970), and Wright (1964).[8] The second, proposition 27, alleges there is a positive relationship between the military power of a state and its foreign conflict behavior. Studies which support this are Wright (1964), Small and Singer (1970), Singer (1972), the Fierabends (1969), Keim (1971), Chource and North (1969), Touval (1966), Weede (1970), and Chadwick (1969). However, two other researchers, Rummel (1968) and Russett (1967) contradict the findings.[9] The third, proposition 29, states there is little or no relationship between various national attributes, taken together, and a state's foreign conflict and cooperative behavior. The research in this instance by Rummel (1969), Jalmore and Hormann (1969), Haas (1968) and East and Gregg (1967) is highly contradictory.[10] This contradiction is explained by McGowan and Shapiro who observe that "we need separate propositions for different attributes, but sufficient research to warrant this is not yet available."[11]

Nor are McGowan and Shapiro alone in feeling that sufficient work has not been done in this field. J. David Singer, in explaining the conceptual framework for his noted "The Correlates of War" project, writes that "despite the strongest motivations, a great many case studies, and an endless amount of speculation, we still have little hard knowledge on . . . questions related to international war."[12] This present study will hopefully, indentify an attribute which will help to overcome the deficiencies noted above.

The intent of this researcher's 1972 study was to examine the commonly held thesis that militarism leads to the aggressiveness of nations. It attempted to measure militarism through the use of quantifiable indicators and compare that index with aggressive nation behavior. The current study will update the 1972 study, determine if the findings can be replicated using more current data, enlarge the number of nations in the survey, and subject the entire concept to closer scrutiny.

The 1972 study of militarism concluded that militarism, as defined in the study, positively correlated with foreign conflict behavior during the years investigated. Social, economic and political data was collected for the base year of the study, 1967, and compared to foreign conflict in 1967 and 1968. One of the conclusions was that the economic and social factors of a militarized nation were more important in determining a nation's foreign conflict behavior than its political factors. The significance of that finding was that censorship, military occupation of governmental decision-making offices, and large defense expenditures at the cost of social programs, did not portend that a nation would exhibit a more aggressive foreign conflict pattern.[13]

The repeating of a study may, at first glance, appear to be a meaningless exercise. Rummel reports that this lack of concern with replication, that is taking of propositions from previous studies and subjecting them to further tests, is one of the failings in the field of international relations.[14] Others are not so gentle in their criticism of the discipline. Karl Deutsch commented that:

> We suffer from the curse of enforced originality which makes it a crime for a graduate student to replicate somebody else's experiment and forces the unhappy man to think up a new wrinkle on every experiment. I wish we could get an inter-university agreement that we expect everybody who earns a degree to do two things: first, to replicate honestly one experiment in social science and then, if he must, invent a new one. If physicists and chemists had not replicated each other's experiments, they would still be in the age of alchemy.[15]

Some efforts at replication have been made and often they refute the findings of earlier studies. Using replication, Jack Vincent has recently taken issue with various researchers who investigated conflict.[16] Andrew Mack, in a critical review, takes many of the researchers mentioned earlier to task and concludes that,

> We sometimes have the impression that they (the research) were performed by intelligent Martians whose only knowledge of the world was based on the data banks culled from such sources as the New York Times Index, and whose theoretical ideas were wholly constrained by a knowledge of little more than data testing.[17]

It is the intent of this research project to present a topical examination of some indicators of militarism and foreign conflict behavior. This is prompted by a paucity of systematic research of the phenomenon of "militarism" and the lack of empirical investigation of the thesis that a militarized nation will be involved in foreign conflict more than is one not militarized. Assumptions, such as those stated previously, and echoed by Arnold J. Toynbee that "militarism is suicidal is a proposition which will hardly be disputed by any one whose opinion

carries weight"[18] have formed the impetus for this research. It is hoped that by a systematic examination of militarism, and evaluation of it against foreign conflict behavior, fresh insights can be gained on this seemingly important subject.

CHAPTER I

ENDNOTES

1. Kjell Skjelsbaek, "Militarism, Its Dimensions and Corollaries: An Attempt at Concepted Clarification," in Problems of Contemporary Militarism, ed. by Asbjorn Eide and Marek Thee, p. 79.

2. Marek Thee in Problems of Contemporary Militarism, p. 15.

3. Ibid., p. 31.

4. Karl Liebknecht, Militarism and Anti-Militarism, p. 51.

5. As quoted in James A. Donovan, Militarism U.S.A., p. 25.

6. This interest resulted in a M.A. Thesis, Militarism and Foreign Conflict Behavior: A Quantitative Study, by MAJ David G. Hansen, 1972.

7. Patrick J. McGowan and Howard B. Shapiro in The Comparative Study of Foreign Policy: A Survey of Scientific Findings.

8. Ibid., p. 94-5.

9. Ibid., p. 95-7.

10. Ibid., p. 98-9.

11. Ibid., p. 99.

12. J. David Singer, "The Correlates of War Project: Interim Report and Rationale," World Politics, January 1972, p. 243.

13. For a complete analysis of the findings, and others, see Hansen, pp. 81-95.

14. Rudolph J. Rummell, "Dimensions of Conflict Behavior within and Between Nations," General Systems (Yearbook of The Society for General Systems Research), 1963, p. 3.

15. Karl W. Deutsch, as quoted in McGowan and Shapiro, p. 219.

16. Jack E. Vincent, "Internal and External Conflict: Some Previous Operational Problems and Some New Findings," Journal of Politics, February 1981, pp. 128-142.

17. Andrew Mack, "Numbers are Not Enough: A Critique of Internal/External Conflict Behavior Research," Comparative Politics, July 1975, p. 616.

18. Arnold J. Toynbee, War and Civilization, p. 12.

CHAPTER II

MILITARISM: SOME DEFINITIONS AND ITS INDICATORS[1]

The success of this research effort rests on the requirement to adequately explain the concept of militarism. This is necessary to permit data collection and subsequent submission of it to analysis. In the 1972 study, a militaristic society was defined as,

> One where conscription is an accepted part of the political and social landscape; one that gives to the military the highest priority in claims on the natural resources; one where the military is beyond the effective reach of institutions that ordinarily exercise critical control; one where free expression is a threat and therefore cannot be tolerated; one where the economy is largely dependent upon the military; and, one that is capable of, and willing to, use its armed forces in its relations with other states.[2]

The above definition is the distillation of the thoughts of many authors who have written on militarism. Wilson's assertion that militarism was the use of armies for aggression has already been discussed. Others, such as Liebknecht, argue that militarism "expresses in the strongest, most concentrated and exclusive form the national, cultural and class instinct of a nation."[3] A more recent author defines militarism as:

> . . . a policy or principles supporting the maintenance of a large military establishment. In its extreme form, it is defined as the tendency to regard military efficiency as the supreme ideal of the state and it subordinates all other interests to those of the military.[4]

Another definition says militarism is the "preponderance of the military class or prevalence of their ideals . . . . The policy of aggressive military preparedness."[5] And a dictionary asserts that militarism is "the policy of maintaining strong armed forces and being ready and willing to use them."[6] Eide and Thee discuss the problems of definition in their edited work, Problems of Contemporary Militarism. Thee points out that "the very terms 'militarism' and 'militarization' need more elucidation, and need to be given a meaningful contemporary elucidation . . . and are too often applied in the political debate without precise definition."[7] Later in the book, Michael Klare defines

> Militarism as the tendency of a nation's military apparatus (which includes the armed forces and associated paramilitary, intelligence and bureaucratic agencies) to assume ever-increasing control over the lives and behavior of its citizens; and for military goals (preparation for war, acquisition of weaponry, development of military industries) and military values (centralization of authority, hierarchization, discipline and conformity, combativeness and xenophobia) increasingly to dominate national culture, education, and media, religion, politics and the economy at the expense of civilian institutions. This definition is consistent with Marek Thee's picture of militarism as subsuming 'a rush to armaments, the growing role of the military (understood as the military establishment) in national and international affairs, the use of force as an instrument of dominance and political power, and the increasing influence of the military in civilian affairs.'[8] (Emphasis in original)

The above definition coincides with the definition stated at the beginning of this chapter. Therefore, this study's definition, as stated, is a valid interpretation for the purpose of operationalizing the term.

Seven indicators of militarism, very similar to those used in the 1972 study, have been selected for the purpose of trying to quantify militarism. Although more, or other, indicators could have been chosen it was felt that these seven were universally applicable and describe the overall militarized posture of a nation.

A consideration in selecting the indicators for the present research was the stated aim to replicate the 1972 study. Inasmuch as these seven indicators parallel those used in the 1972 study, replication can be accomplished. The following discussion of each indicator will point out where it varies from the 1972 study, if applicable.

Defense Expenditures as a Percentage of Expenditures for Health and Education

This is a particularly meaningful measurement in that the investment a nation has in its military establishment is perceived to operate at the expense of the social environment. The current dialogue in the United States over the expanded defense budget is testimony to this sentiment.

It is acknowledged that expenditures for defense should be judged on the requirement that a nation's physical integrity must be maintained.[9] But, no matter how severe the threat of external aggression, military expenditures must be looked at and justified, in light of other, particularily social, national priorities. Thus, the inclusion of this indicator of a nation's priorities, regardless of its citizen's well-being, or the threat at its borders.[10]

After defense, the largest monetary outlay most governments make is for education. Health expenditures usually represent the third largest expenditure in the public sector. These two, health and education, appear to be a sound measure of the total government spending for social improvement and when compared to the military budget will demonstrate the priorities the state places on the social development of its people.

For purposes of collecting data for this indicator, two sources were used. The primary source was World Military Expenditures and Arms

Transfers 1969-1978."[11] This was supplemented in many cases by World Military and Social Expenditures 1981.[12] 1978, or the nearest year to 1978, data was used and discrepancies resolved in favor of the primary source.

Defense Expenditures As A Percentage Of Gross National Product (GNP)

This statistical indicator is useful to expose the burden of the military budget on the economy and the economy's ability to support such expenditures. Critics of this indicator argue that it fails to reveal the significance of military expenditures in countries with low per capita incomes. They argue that such nations are likely to have a greater need for the resources diverted to defense than nations having high per capita incomes. The importance of this indicator is that military spending, regardless of per capita income, is competing with consumption and investment resources. In those nations militaristically inclined, a proportionately greater share of those resources will be diverted to military uses than in countries not as militarized. Monies spent on defense expenditures deprive other public and private sectors of resources needed for social and economic development. This indicator will reveal the degree of that deprivation when compared to other nations.

In an effort to include all relevant military expenditures for this indicator, computations were made using information in The Military Balance 1978-1979 published by the International Institute for Strategic Studies (IISS).[13] When information was missing for 1978, subsequent issues of The Military Balance, World Military Expenditures and Arms Transfers 1969-1978 and World Military and Social Expenditures 1981 were consulted.

It is commonly believed that in a nation where military expenditures compete with capital investment, and where those capital investments are a high proportion of the GNP, then military spending will be low, and vice versa. A study by Russett in 1964 found no such correlation. In that survey of eighty-two countries, Russett also found no correlation for the hypothesis that rich nations, by virtue of their greater resources over the subsistence level, spend more for defense than poor nations.[14]

With evidence such as Russett's that rich nations do not necessarily spend more for defense, or that there is not an inverse relationship between capital investment and defense spending, the validity of this broad-based indicator, defense spending as a percentage of the GNP, is upheld as opposed to some other indicator such as the industrial output or wealth of a nation.

Military Personnel As A Percentage Of The Economically Active Population

The previous indicators examined the economic burden of defense expenditures on social and economic activities. This indicator attempts to isolate how available manpower is used in societies. Although measures which come more easily to mind might be military personnel as a percentage of the total population and/or as a percentage of the military cohort, the use of the present indicator is more appropriate to achieve the desired aims of the research.

Frequently, it is found that military manpower may be low when compared to the total population, but is considerably higher when examined against the economically active population. The propriety of using this indicator, and the previous two, was demonstrated by their

relationships revealed in the 1972 study. The 1967 data showed that the three indicators were found to have correlation coefficients of r = .50 or greater.[15] This supports Russett's study where he measured defense expeditures as a percentage of the gross national product, and defense expenditures and military personnel, and found a correlation coefficient of r = .69.[16]

The military personnel figures used in this indicator do not include civilian personnel engaged in agencies or production related to the military. Although these numbers would be valuable for inclusion, they are difficult to ascertain with any degree of accuracy. In spite of the fact that the number of people employed as a result of defense expenditures in allied activities is excluded, the proportions they represent are not insignificant. One source estimates that over 25 million civilians worldwide are directly employed by the military including those working on weapons research, production, or related activities.[17]

Kenneth Boulding has implied that there may be a figure which represents a measure of the maximum total men which can be devoted to defense.[18] Although he does not venture a guess as to what such a figure might be, this indicator could be used in conjunction with a scale of militarism to represent such a value in future research. Other matters would have to be accounted for, however. For example, a large prosperous nation, such as the United States, which can feed itself with about five percent of its labor force engaged in agriculture, can allow more of its personnel to be employed in defense activities than some less industrialized nation. Another consideration which defies quantification is the efficacy of the defense establishment. Although these alternatives make for excellent measures of the social and economic

resources allocated to the military, they can not be reasonably quantified for this study. Therefore, the economically active population, that is, the total employed persons (including employers, persons working on their own account, salaried employees and wage earners, and, as far as data was available, unpaid family workers) and those unemployed represents the most quantificable measure available.

Data was collected by searching the Yearbook of Labour Statistics published annually by the International Labour Office. Various years from 1975 to 1981 had to be consulted due to reporting vagaries by that organization. Additionally, for those few nations where data was not available (for example Oman and the two Chinas) Keesing's Contemporary Archives and Facts on File were used.

Freedom

Most international political scholars will agree that in a militaried society, that is one where the will of the military and the ideals of militarism prevail, freedom of thought and action is suppressed. A simplistic explanation for this could be that in a militarized society the ideals of the state become paramount to those of the individual and therefore some fundamental human rights suffer. In the 1972 study, the measure used to examine this attribute was "press censorship." Press censorship was used because there were no existing cross-national studies of freedom of rights for 1967. Since 1972, however, the "Freedom House" has conducted a country-by-country survey of the status of freedom in the world as a complement to its more generalized yearly surveys. Published each January in the bi-monthly magazine, Freedom at Issue, it is a source for the information needed to quantify this indicator. See Appendix A for how "Freedom House" codes freedom of

civil liberties on a seven step scale.

This indicator is subject to several valid criticisms. One is that the degree of centralization of political power within a state seems to dictate the amount of freedom within that nation. Since this study is not assessing forms of regimes, it does not seem practical to control for political structures. In any subsequent analysis of the data, this variable should be examined as to its loadings on the others, and the consistency of those loadings, to determine if political participation, or militarism, is the dominant force. Another criticism is that the source cannot be called "objective" or "unbiased." But "Freedom House" is the only organization which has attempted to survey this important field and therefore its results are the only ones available for use.

Recruitment Of Military Personnel

The socialization of a society to accept conscription, or universal military training, is an indicator measuring the pervasiveness of militarism within a nation. Compelling military service, either through mandatory service or universal military training, should impart two characteristics to a nation. First, that such service is permitted by the body politic reveals a willingness to subject youth to be trained in the esoterics of war. This places freedom of choice subordinate to the ideals of the state. Second, exposure of many youth to military life influences their political attitudes. One of the most frequently heard negative arguments from those who believe that the United States is a militarized society is the large number of our citizens who have served in the military. It is posited that their socialization to military ways permit them to acquiesce to militaristic decisions by political leaders.

At this point, it can be argued that military life could be so beneficial, particularly in the underdeveloped nations, that the ranks are filled with volunteers, inflating the size of the armed forces, and rendering this indicator of militarism invalid. If the size of the armed forces were the only critera selected to examine militarism, then this argument would be correct. As William Gutteridge has pointed out "in poor countries generally, . . . the armed forces can stand for a square meal and comfortable accommodation."[19] In this study, the "spirit" of militarism is being measured, not by the size of the armed forces, but by the practice of having involuntary service for those for whom other, more attractive, ways of earning a living exist.

Opponents of the manner of recruitment as a measure of militarism have argued that there may be little opportunity for employment in the economy in an underdeveloped nation. Although the nation may reek of militarism, the ranks will be filled with volunteers and conscription is not required to keep them filled. The fact that the nation relies on volunteers to fill its ranks is meaningless since, in this instance, volunteerism and large military establishments do not mean that the nation is answering a "call to arms," but, rather, the populace is answering a more basic call of "three hots and a cot." One wonders if the recent successes the United States has enjoyed with its "All Volunteer Force" is not the operation of this principle of survival rather than a "voluntary" serving of the colors.

The method of recruitment of personnel into the military, characterized as being voluntary, conscriptive, or mandatory, appears to be a tenable measure of militarism. Examples can be found where universal military training is practiced, yet the country is at peace (Switzer-

land); however, exceptions of all the indicators already mentioned have also been in evidence. The practice of mandatory service by a nation does not arbritrarily mean that the nation is absolutely categorized as militaristic any more than a militaristic nation will always practice mandatory service. The assumption being tested is that this indicator reveals the social personality of nation's inhabitants. The "spirit" socialized into a society by compulsory military service certainly could be instrumental in the citizens' acceptance of aggressive foreign policy decisions by their government officials.

Sources for this indicator were primarily the Defense & Foreign Affairs Handbook 1978,[20] World Armies,[21] and The Military Balance. In every possible case, the actual method of inducting personnel into the armed forces was coded, not the nation's constitutional or legal provisions for filling the ranks. For example, some nations were shown in various sources to conscript their military manpower; however, in practice, sufficient volunteers were available to meet the quotas. Therefore, those nations were coded as recruiting voluntarily. The codings were volunteer = 1, conscription = 2, form of universal military training = 3.

Involvement Of The Military In Politics

Quite a few authors have attempted to analyze, interpret and explain how and why the military participates in the politics of nations. They have explored and hypothesized about the effects on the military of the social and political conditions of society;[22] of the military's reference ("those social groups to which the psychologically relates himself");[23] and the importance of professionalism.[24] All these characteristics obviously play an interconnecting role in the participa-

tion of the military in politics. It is too simplistic and seductive to imply that just one of these is the prime cause for military intervention in politics. Pervasive as many of the arguments are, historical examples abound which can either refute or substantiate the arguments. Suffice it so say that there is a propensity for the military to intervene in the politics of some nations at some times.[25]

One of the most accurate and complete definitions of the phrase "military intervention in politics" is given by S.E. Finer.[26] He explains that the expression means "the armed forces constrained substitution of their own policies and/or their persons, for those of the recognized civilian authorities.[27] This definition illustrates that imposition of the military will, and/or their persons in some cases, is a denial, at least temporarily, of the principle of civil supremacy of government. This represents a partial or total collapse of the political elements which safeguard a nation's government, civil ideals and policies from subordination by the military. Finer observes that where public attachment to civilian institutions is strong, military intervention in politics will be weak.[28]

Thus, it seems that the militaristic spirit of a nation, as felt on three national attributes, can be determined by examining the military's involvement in a nation's politics. These three attributes are: (1) the limit to which people will allow the military to participate - - that is, the overall spirit of militarism of the society; (2) the importance the military places on itself as a "righter of wrong" or the agency which can return, or place, the nation on its proper course through history; (3) and most important, the militaristic spirit which exists within the government that must, in some measure, affect the foreign policies and actions of the government.

The question arises as to whether an examination of the role played by the military in a nation for a short period of time, like 1978, would be a valid indication of the role, past and future, the military had and would have in the nation's future politics. It is plausible that the military could have just temporarily interposed and would soon retreat. Military intervention could be considered a transitory phenomena; however, in historical perspective this assumption is not borne out. In fact, if there is one thing on which most writers of the military's role in government agree, it is that once the military has established itself in an interventionist role, it will usually remain in that role for a considerable length of time. As has been observed:

> We have seen the military engage in politics with relative haste but disengage, if at all, with the greatest reluctance. Armed forces of the leaders whom they have raised to power have indeed been known to withdraw from active politics and retire into a scrupulous neutrality; but, in historical record, they are rare.[29]

Therefore, the result of a review of the military's role in government for a particular year, in this case 1978, is indicative that the interventionist role has been, and will continue to be, enduring.

Once military intervention has been accomplished, regardless of its form, it does not necessarily represent a total dominance of public thinking. Most authorities recognize that the military must use the services of the existing institutions to carry out the daily functions of government.[30] Even in the most overt form of military intervention, the military commonly uses the existing bureaucracy, because the military frequently does not do well as bureaucrats. Finer's analysis of the armed forces' weak performance in political bureaucracies revolves around the military's technical inability to administer any but the most primitive country as well as its lack of moral title -- legitimacy. He

summarizes by writing that

> these preclude, then, save in exceptional cases and for brief periods of time, from ruling without civilian collaboration and openly in their own name. Soldiers must either rule through civilian cabinets or else pretend to be something other than they are.[31]

The preceding arguments lead to the conclusion that military intervention must be examined not only in its overt forms, but also in its more subtle expressions.

All the nations in this study were examined and scaled according to the level of political intervention by the military in 1978. The categories and definitions were extensively borrowed from Finer's analysis of military intervention.[32] The first level of the scale used to rate the military's role is that of no intervention. The next, or lowest level of military intervention, is influence. This occurs when the military has attempted to convince civil authorities by appeal to reason and emotion. It can, and usually is, a constitutional method similar to the lobbying of any large bureaucratic organization; but, in this case the influence of the military can be more important due to risks involved in rejecting their advice.

The next level of intervention is pressure. By use of sanction, or threats, on a spectrum of constitutional to unconstitutional intimidation, the military works upon, and through, the civil authorities. The other levels occur when more overt forms of intervention come into focus. Among these overt forms of intervention is displacement, which is the removal of one cabinet or ruler for another achieved by violence, or threat of violence. The civilian regime, as such, is not overthrown, only a particular set of civilians. The most severe form of intervention, according to Finer, is supplantment which is the case when the

military establishes itself in place of the civilian government. Thus, the adjectival rankings for this indicator are from no intervention to the most pervasive, supplantment, numerically coded 1 to 5.

The sources for this very subjective variable were the New York Times Index, Keesing's Contemporary Archives, Facts on File, The Almanac of World Military Power,[33] Defense & Foreign Affairs Handbook and World Armies.

The Orientation Of the Military Establishment

The final indicator used to sense militarism is an analysis of the military's activity and place in a nation. The fact that the military is large, or consumes a significant part of the economic resources of a nation, does not necessarily suggest that it will have an aggressive force structure. The present indicator attempts to control for those nations which might appear to have a disproportionate share of their economic productivity and natural resources given over to the military but whose military is not designed or intended to act as an external aggressor. An example of this is the use of the military to conduct research in medicine, or physical and social sciences, to augment that done in both private and governmental agencies.

The Israeli armed forces' educational and vocational activities, which are directed towards integrating the nation by performing necessary services for the entire society, is another illustration of how the military can perform useful services which are not intended exclusively for defense. Many nations, indeed the majority, maintain defense establishments which are principally designed to provide only security and thus consist of a limited offensive element. Japan, since the close of World War II, has maintained a "self defense" force which has been,

until recently, a truly defensive organization. Other nations, particularly the developing nations, use the military to perform in an internal role through civic action projects or by providing internal security, or both.

Although the military establishments in some nations consume a sizeable portion of the GNP, these expenditures are not always for hardware or training to engage in, or resist, aggression. As was explained above, a nation with a large fleet of aircraft and airborne troops, or an array of offensive missile systems, should be considered more aggressively aligned than one which just provides a defensive screen as a safeguard to offensive weapons or armies of other nations. Similarly, a nation which supports combat troops, but does not provide the necessary logistical support for sustained distant operations cannot be considered a great offensive threat.

With these points in mind, an analysis was made of each nation's military forces to ascertain its military posture in 1978. The nations were coded from one to five:

1. Military forces not apparent, not in existence, or so small as to be insignificant.

2. The military forces were characterized as defensive to an internal threat.

3. Military forces characterized as offensive in nature to an internal or insurgency type of threat.

4. Military forces characterized as principally defensive toward an external threat.

5. Military forces organized offensively to an external threat.

Some attention was also given to the geographic location of the nation and its physical setting; e.g., desert, jungle, mountainous,

etc., and that of its neighbors. Through this indicator it is felt that compensation can be made for some of the previous indicators which weighed only consumption and which placed the underdeveloped state, using its military for "civic action," at a disadvantage. Defense & Foreign Affairs Handbook 1978, World Armies, Armed Forces of the World,[34] and the Almanac of World Military Power were all reviewed to arrive at the best possible codings.

A Closing Note

This chapter has discussed "militarism" and identified seven indicators used to operationalize the term. More, or different, indicators could be suggested; however, for a preliminary look at militarism, and for the ease of replication, these seven are considered appropriate for this research effort.

It is important to remember at this point that there is no evidence that any other social scientist has attempted to quantify the term, or come to grips with its real meaning in a quantifiable manner. If this chapter does little else but give rise to some enlightened discussion on the subject, it will have been successful.

CHAPTER II

ENDNOTES

1. Much of the substance of this chapter originally appeared in David G. Hansen, MAJ., Militarism and Foreign Conflict Behavior, pp. 38-57.

2. Ibid., p. 4. See also Donald McDonald who has identified the first five as major characteristics of a militarized society in "Militarism in America," The Center Magazine, pp. 13-14.

3. Karl Liebknecht, Militarism and Anti-Militarism, p. 1.

4. James A. Donovan, Militarism, U.S.A., p. 24-25.

5. The Oxford English Dictionary, p. 438.

6. Webster's New World Dictionary of the American Language, p. 933.

7. Marek Thee, "Militarism and Militarization in Contemporary International Relations," in Problems of Contemporary Militarism, ed. by Asbjorn Eide and Marek Thee, p. 15.

8. Michael T. Klare, "Militarism The Issues Today," in Problems of Contemporary Militarism, p. 36.

9. Duane Lockard has pointed out that all expenditures in the military budgets, for either offensive or defensive elements, are contemporarily termed "defense" expenditures. Since this expression is universally accepted, and is synonomous with the military budget and/or expenditures, it will be so used in this paper. Duane Lockard, in The Perverted Priorities of American Politics, p. 20.

10. For a discussion of this problem see William Gutteridge, Military Institutions and Power in New States, p. 64.

11. US Arms Control and Disarmament Agency, World Military Expenditures and Arms Transfers 1969-1978.

12. Ruth L. Sivard, World Military and Social Expenditures 1981. A compilation of data from 1961-1979.

13. The Military Balance 1978-1979.

14. Bruce M. Russett, "Measures of Military Effort" in The American Behavioral Scientist, February 1964, p. 26-29.

15. Hansen, p. 61.

16. Russett, p. 26.

17. Sivard, World Military and Social Expenditure 1980, p. 8.

18. Kenneth E. Boulding, Conflict and Defense, p. 232.

19. Gutteridge, p. 82.

20. Gregory R. Copley, et. al., eds. Defense & Foreign Affairs Handbook, 1978.

21. John Keegan, World Armies.

22. See for example, Samuel P. Huntington, Political Order in Changing Societies.

23. See for example, Robert M. Price, "A Theoretical Approach to Military Rule in New States" in World Politics, April 1971, pp. 399-431.

24. See for example, Morris Janowitz, The Military in the Political Development of New Nations.

25. For a succinct discussion of this problem in developing nations, see John Spanier, Games Nations Play: Analyzing International Politics, 3rd Edition, pp. 551-555.

26. S.E. Finer, The Man on Horseback.

27. Ibid., p. 23.

28. Ibid., p. 31.

29. Ibid., p. 242.

30. See for example, Theodore Wycoff, "The Role of the Military in Latin American Politics," in Western Political Quarterly, September 1960, p. 757 and William Gutteridge, The Military in African Politics, p. 141.

31. Finer, p. 14.

32. Ibid., pp. 86-87.

33. Trevor Dupuy, Col. (Ret.), Grace P Hayes, and John A. Andrews, Col. (Ret.) eds., The Almanac of World Military Power, 4th Edition, 1980.

34. Robert C. Sellers, ed., Armed Forces of the World: A Reference Handbook, 4th Edition, 1977.

CHAPTER III

THE STUDY'S OTHER VARIABLES: FOREIGN CONFLICT BEHAVIOR AND THE NATION SELECTION PROCESS

Foreign Conflict Behavior

Foreign conflict behavior would at first appear to be easily codified. The aggressive actions one nation takes against another can be identified and an assessment then made of the significance of each event. But closer observation reveals that there is more to foreign conflict than the obvious overt steps.

Extensive work has been done in the field of foreign conflict behavior by a number of researchers. Rummel and Tanter[1] have each experimented with 13 foreign conflict variables. In both cases the foreign conflict variables were the same, being developed by Rummel for a 1963 study. The purpose of their research was to find out if clusters of relationships, or dimensions, could be determined from among the 13 variables.

After the collected information of Rummel and Tanter was factor analyzed, it was revealed that the 13 foreign conflict variables clustered into three dimensions which were labeled "war," "belligerency," and "diplomatic activity." The conclusions of their efforts were that nations could stand anywhere on a scale of conflict behavior without having traveled through previous increments to get there. This information is very valuable for this study since the 13 variables can be coded

according to the intensity of the conflict. One variable that Rummel and Tanter used, "number of killed," was considered as being inappropriate for this study and was eliminated; however, the remainder were used to score a nation's foreign conflict for the years under investigation.

In the 1972 study[2] the foreign conflict values were awarded according to an evaluation of the level of conflict on a scale of violence. However, since 1972 a few researchers have replicated Rummel and Tanter's research and published their results. One work by Jonathan Wilkenfeld[3] summarizes their findings and combines their data. In so doing he was able to conduct an analysis of a large number of nations for a six year period, instead of two and three year periods. The results, summarized in Table 3-1, reveal that Wilkenfeld's dimensions of "war," "belligerency" and "diplomatic activity" vary slightly from Rummel's and Tanter's.

For this current study, the coding for foreign conflict was changed from the 1972 study to fit into Wilkenfeld's dimensions of "war," "belligerency" and "diplomatic activity." Table 3-2 reflects the differences between the 1967-1968 codings used in the 1972 study and the 1978-1979 data used in this research effort. This changing of coding did not compromise the attempt at replication since it has already been established that nations enter a conflict spectrum at any point and do not necessarily ascend through a continuum of increasing violence.[4] It is important that one only be aware of the coding differences when comparing raw conflict values between the two studies.

A difficulty which has hampered doing a truly comparative analysis of foreign conflict behavior is the assumption that conflict and cooper-

Table 3-1. Factor Analysis of Foreign Conflict Behavior Data, 1955-60
(Orthogonal rotation; Comparison with Rummel and Tanter solutions)

	War			Belligerency			Diplomatic			h^2		
	T2	W1	R1	T3	W2	R3	T1	W3	R2	T	W	R
Severance relations	.09	.14	.13	(.82)	(.64)	(.82)	-.06	-.32	-.17	.68	.54	.71
Expelled/recalled--ambassadors	.18	.09	-.16	-.05	-.03	-.08	(.67)	(.55)	(.66)	.49	.31	.47
Military Action	(.74)	(.62)	(.65)	.02	.17	(.57)	.28	.18	-.14	.63	.45	.77
War	(.83)	(.80)	(.85)	-.09	-.04	-.10	.02	.16	.15	.70	.67	.75
Troop Movements	.32	.08	.47	.26	.09	.28	.46	(.62)	(.59)	.38	.40	.64
Mobilizations	(.58)	(.56)	(.60)	.19	.25	.35	.34	-.05	-.08	.48	.38	.49
F.-demonstrations	.03	.21	.13	(.64)	(.56)	(.63)	.34	.13	.42	.52	.38	.60
Negative sanctions	.22	.16	.20	.26	(.64)	(.64)	(.58)	.21	.41	.46	.48	.62
Protests	.26	.34	(.62)	-.06	.26	.22	(.79)	(.66)	.49	.70	.62	.67
Expelled/recalled--lesser	-.29	0.23	.33	.21	(.56)	.08	(.59)	.38	(.60)	.47	.52	.48
Threats	.35	.40	(.65)	.23	.48	.48	(.70)	(.51)	.43	.66	.66	.84
Accusations	.46	.47	(.70)	.09	.42	.41	(.67)	(.50)	.35	.66	.65	.79
Foreign killed	(.76)	(.77)	(.87)	.23	.09	.19	.21	.21	.10	.67	.65	.80
Percent Common Variance	37.7	38.4	46.2	19.9	30.2	29.1	43.3	30.0	24.6	100.0	100.0	100.0
Percent Total Variance	21.8	19.8	30.7	10.1	15.6	19.3	25.2	15.5	16.3	57.9	51.6	66.4

Parenthesis indicates loading $\geq .50$.
Factors labeled W are Wilkenfeld's factors. Factor labeled R are Rummel's 1955-57 factors. Factors labeled T are Tanter's 1958-60 factors.

Source: Conflict Behavior and Linkage Politics, p. 112.

Table 3-2. Differences in Coding Foreign Conflict

Conflict Description*	Coding Value (Score) 1967-1968	1978-1979
No Conflict	0	0
Protest	1	1
Accusation	2	2
Expel/Recall Lesser Officials	3	7
Negative Sanctions	4	6
Expel/Recall Ambassador	5	4
Threats	6	3
Foreign Demonstrations	7	8
Troop Movements	8	5
Severance of Diplomatic Relations	9	9
Military Actions	10	10
Mobilization	11	11
War	12	12

*For a complete description of each variable, see Appendix 2.

ation operate at opposite ends of the same scale. Indeed, such may not be the case. John Weinstein argues that cooperation and conflict may work on two different planes. Thus the internal pressures of a state affect its external conflict actions and summing external conflict events does not take into account cooperative forces also operating within a nation.[5] However, for purposes of the present research, approximation of the intensity of a nation's foreign conflict behavior is being examined, not the nations total relationship with other states.

To accomplish this analysis, each nation was surveyed for 1978 and 1979 using the New York Times Index, Keesing's Contemporary Archives and Deadline Data on World Affairs to ascertain its most overt and typical foreign conflict actions for a particular year. This resulted in some subjective evaluations on the part of the researcher, an inherent weakness of the study. Further, cooperative behavior was not recorded except to note that a nation which had no reported foreign conflict behavior received a value of zero in the codings.

To summarize, the foreign conflict codings which are thirteen indicators of foreign conflict behavior, scaled from 0 to 12, have been used. These are based on the conflict behavior studies of Rummel and Tanter as modified by Wilkenfeld. A review of a nation's conflict behavior during a given year was made and its most intense behavior actions for the year were determined and a numerical value indicating a foreign conflict score awarded. Hereafter, the values given by this process will be termed a nation's "foreign conflict value." The thirteen foreign conflict values are identified as: no conflict behavior, anti-foreign demonstrations, diplomatic protests, negative sanctions, severance of diplomatic relations, expelling or recalling ambassadors, expelling or recalling officials of less than ambassadorial rank, accu-

sation, threats, military action, war, mobilization, and troop movements. A detailed description of each foreign conflict variable can be found at Appendix B.

Nation Selection Process

The study of militarism which this author originally did in 1972, used a thirty-five nation sample. Those nations were selected by using a model developed by Phillips Cutright[6] in which he measured political development. The model was an index of communications indicators which compared that index to the role political parties play in national politics.

One hundred and twenty-nine nations provided enough data in 1972 to permit using Cutright's scale. Once the nations were plotted on a scattergram of political development (see Figure 3-1) the nations were regionalized using another study done by Cantori and Spiegel.[7] Regionalization was necessary to reduce the field of nations to a manageable size and look at only the most politically developed nations of the world. Careful examination of Figure 3-1 will reveal that there is a tendency for nations to group economically and politically by geographic location. The African countries, for example, grouped in the lower left corner, but this is to be expected because of the briefness of sovereignty in relation to most of the other nations of the world. However, other regional groupings emerged. The Latin American countries grouped in the upper left; the European countries clustered in the upper center, and right; the South Asian nations appeared in the center left; and the East European countries were generally centered on the entire matrix. This noticeable willingness to cluster meant that the finally chosen sample could not be simply those nations in the upper right quadrant of

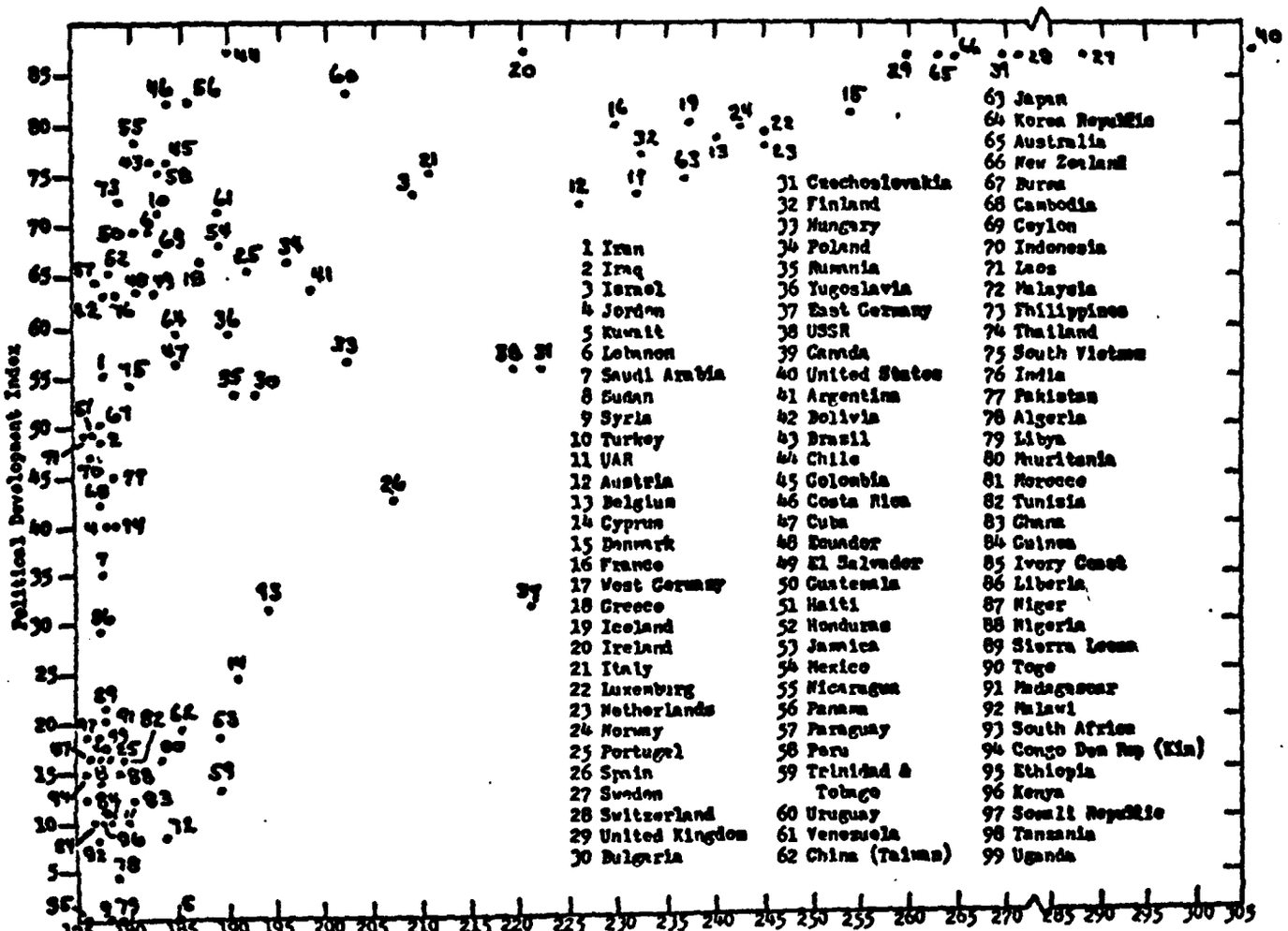


Figure 3-1.

Relationship of Political Development to Communications Development: 99 Nations.

the chart, i.e. the more economically and politically developed nations, since many regions would then be excluded. Therefore, it was necessary to undertake a systematic regionalization of the world so that a representative sampling could be made from each region. By regionalizing the world, the top one-third from each regional grouping could be selected to produce the desired sample.

For the present research effort, it was determined that not only would it be helpful to look at the original thirty-five nation sample, but enlarge the study to include as many nations in the world as possible. As a result, a total of 139 nations were finally surveyed in this study and data collected for the years 1978 and 1979.

For comparative purposes it was decided to single out, by region, the thirty-five nations which were lowest in the development on the Cutright scale. The 1967 data was re-examined and thirty-five nations which clustered lowest in various regions were chosen. Instead of selecting the bottom one-third from each region, as was done for the most developed nations in the 1972 study, two regions (Western Europe and North America) were limited to the number of nations they could provide. In so doing, some politically weak states in Africa and Latin America were included in the bottom thirty-five which might have been otherwise overlooked.

Table 3-3 lists those nations used in the 1972 study (titled the "Top 35" for this study) and the thirty-five nations determined to be lowest in political-economic development used for comparative purposes in this study (titled the "Bottom 35"). Table 3-4 shows all the nations (139) for which information was collected for the years of this study, 1978 and 1979. Table 3-5 indicates those nations, although independent in 1978, eliminated because sufficient data could not be collected to

Table 3-3. The "Top 35" and "Bottom 35" Nations

"Bottom 35"	"Top 35"
Ethiopia	Argentina
Congo	Belgium
Tanzania	Sri Lanka
Malawi	Chile
Madagascar	Costa Rica
Guinea	Czechoslovakia
Niger	Denmark
Togo	Ghana
Libya	Finland
Algeria	Hungary
Cent. Af. Rep.	India
Pakistan	Iran
Malaysia	Iraq
Thailand	Israel
Chad	Japan
Laos	Kenya
China (ROC)	Mexico
Trinidad & Tebago	Morocco
Jamaica	Netherlands
Haiti	New Zealand
Cuba	Nigeria
Paraguay	Panama
Ecuador	Philippines
Honduras	South Africa
Germany, E.	Switzerland
Rumania	Tunisia
Cyprus	Turkey
Spain	Uganda
Greece	USSR
Portugal	United Kingdom
Syria	USA
Kuwait	Uruguay
Egypt	Venezuela
Sudan	Vietnam
Bolivia	Sweden

Table 3-4. Alphabetical Listing of Nations and Study Number

No	Nation	No	Nation	No	Nation	No	Nation
1	Afghanistan	54	Germany, E.	62	New Zealand	97	Vietnam
3	Albania	55	Germany, W.	106	Nicaragua	134	Yemen, S.
4	Algeria	28	Ghana	107	Niger	135	Yemen, N.
6	Angola	56	Greece	65	Nigeria	136	Yugoslavia
2	Argentina	57	Guatemala	108	Norway	137	Zaire
7	Australia	58	Guinea	109	Oman	138	Zambia
8	Austria	63	guyana	110	Pakistan	139	Madagascar
9	Bahamas	64	Haiti	68	Panama		
10	Bahrain	66	Honduras	111	Papua-N. Guinea		
11	Bangladesh	34	Hungary	112	Paraguay		
14	Barbados	67	Iceland	113	Peru		
5	Belgium	36	India	71	Phillipines		
15	Benin	69	Indonesia	114	Poland		
16	Bolivia	38	Iran	115	Portugal		
18	Botswana	39	Iraq	116	Batar		
19	Brazil	70	Ireland	117	Romania		
22	Bulgaria	41	Israel	118	Rwanda		
23	Burma	72	Italy	119	Saudi Arabia		
24	Burundi	73	ivory Coast	120	Senegal		
26	Cameroon	74	Jamaica	121	Sierra Leone		
27	Canada	45	Japan	122	Singapore		
29	Cent. Af. Rep.	75	Jordan	123	Somalia		
30	Chad	47	Kenya	78	South Africa		
13	Chile	76	Korea, N.	91	Soviet Union		
31	China, PRC	77	Korea, S.	124	Spain		
32	China, ROC	79	Kuwait	12	Sri Lanka		
33	Columbia	80	Laos	125	Sudan		
35	Congo	83	Lebanon	126	Surinam		
17	Costa Rica	84	Lesotho	81	Sweden		
37	Cuba	85	Liberia	82	Switzerland		
40	Cyprus	86	Libya	127	Syria		
20	Czechoslovakia	87	Luxembourg	128	Tanzania		
21	Denmark	92	Malawi	129	Thailand		
42	Dominican Rep.	98	Malaysia	130	Togo		
43	Ecuador	99	Mali	131	Trin. & Tob.		
44	Egypt	100	Malta	88	Tunisia		
46	El Salvador	101	Mauritania	89	Turkey		
48	Eq. Guinea	102	Mauritius	90	Uganda		
49	Ethiopia	59	Mexico	132	U Arab Emirates		
50	Fiji	103	Mongolia	93	U Kingdom		
25	Finland	60	Morocco	94	USA		
51	France	104	Mozambique	133	Upper Volta		
52	Gabon	105	Nepal	95	Uruguay		
53	Gambia	61	Netherlands	96	Venezuela		

Table 3-5. Nations Excluded From Study

Cape Verde Islands
Dijibouti
Grenada
Guinea-Bisau
Kampuchea
Sao Tome & Principe
Seychelles
Swaziland
Tonga
W. Somoa
Vatican City
San Marino
Malaive Islands
Liechenstein
Comoros
Brunei
Bhutan

permit analysis of their actions. Appendix C is listing of all the raw data by nation.

Thus, for this study, a total of 139 nations are examined. Seventy of these 139 nations are broken into two groups. One group, the "Top 35" corresponds to the nation sample used in the 1972 study and represents the most developed nations in a number of geographic regions. The other group, the "Bottom 35," are nations at the other end of the spectrum, politically and economically, and are to be used for comparative purposes.

CHAPTER III

ENDNOTES

1. Rudolph J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations" in General Systems (Yearbook of the Society for General Systems Research), 1963, p. 1-50, and Raymond Tanter, "Dimensions of Conflict Behavior Within and Between Nation, 1958-1960 in Journal of Conflict Resolution, March 1964, pp. 48-64.

2. David G. Hansen, MAJ., Militarism and Foreign Conflict Behavior, pp. 50-55.

3. Jonathan Wilkenfeld, Conflict Behavior & Linkage Politics, pp. 107-123.

4. Rudolph J. Rummel, "Dimensions of Foreign and Domestic Conflict Behavior: A Review of Empirical Findings" in Theory and Research on the Courses of War, ed. by Dean C. Priutt and Richard C. Snyder, p. 223.

5. John M. Weinstein, A Vector Analytic Approach to International Systems Conflict.

6. Phillips Cutright, "National Political Development" in Politics and Social Life, ed. by Nelson W. Polsby, Robert A. Dentler, and Paul A. Smith, pp. 568-582.

7. Louis J. Cantori and Steven L. Spiegel, eds., The International Politics of Regions.

CHAPTER IV

THE DATA AND ITS ANALYSIS

As was outlined in the previous chapters, the 1972 study[1] was done using a thirty-five nation sample. Militarism data for the 1972 study was collected for the year 1967 and then compared to each nation's foreign conflict behavior in 1967 and 1968. For the present research effort, 1978 data was collected for 139 nations and compared to foreign conflict in 1978 and 1979.

Various statistical methods were used to analyze the militarism variables and foreign conflict scores. These methods included bivariate and multiple correlation analysis, regression analysis, and factor analysis.[2] The Statistical Package for the Social Sciences (SPSS)[3] contains the necessary programs to conduct the required work and was used for this research.

Table 4-1 compares the 1978 data against the 1967 data in gross terms - means and standard deviations. The "Top 35" for this study are the same thirty-five nations used in the 1972 study whose 1967 data is also given. A comparison of the means and standard deviations between the two studies for those thirty-five nations reveals little change in the eleven intervening years. The most notable difference is an increase (from 2.7 to 3.1) in the "Involvement of the Military in Politics" and an increase (3.46 to 4.8) in "Armed Forces Structural Orienta-

Table 4-1. Means and Standard Deviations of Militarism and Foreign Conflict Values

Indicators	Means/Standard Deviations			
	1967	1978		
	35 Nations	Top 35 Nations	139 Nations	Bottom 35 Nations
1. Defense Expenditures as % of Expenditures for Health & Education	76.71/ 135.77	77.35/ 75.58	85.76/ 110.02	85.5/ 95.2
2. Defense Expenditures as % of GNP	3.6/3.2	5.4/ 3.9	4.6/ 5.0	4.8/4.2
3. Active Military Personnel as % of Economically Active Population	1.9/1.8	1.9/ 2.3	1.9/ 2.4	1.9/2.3
4. Censorship - Freedom	2.9/1.7	3.5/ 2.1	4.2/ 2.0	4.8/1.6
5. Method of Recruitment	1.9/.8	1.9/.9	1.8/.98	2.1/1.3
6. Involvement of Military in Politics	2.7/1.3	3.1/ 1.4	3.3/ 1.4	3.8/1.2
7. Armed Forces Structural Orientation	3.5/1.1	4.0/ 1.3	3.3/ 1.3	3.4/1.2
8. Foreign Conflict, 1967 or 1978	6.5/3.5	3.7/ 3.7	2.6/ 3.5	3.0/3.9
9. Foreign Conflict, 1968 or 1979	6.0/3.6	3.9/ 3.9	3.0/ 3.6	3.4/3.9

tion." Of interest is the jump in the "Percentage of Defense Expenditures as a Percentage of the GNP" (3.6 to 5.4). That increase, coupled with the previously mentioned variable increases, would seem to indicate that the world, or at least these thirty-five nations, are becoming more "militarized."

Note should be taken that despite the change in sources for Variable 4, "Censorship/Freedom," the means and standard deviations changed little on their seven point scales. Further, the reader should not be too encouraged at what appears to be a radical change in foreign conflict, down from about 6 to 3.5. In fact, this change shows consistency when remembering that the foreign conflict values were adjusted for the two studies. By referring to Chapter III and Table 3-2, it will be seen that a value of "6" in the 1972 study represented "Threats." This "6" is the same as "3", "Threats," in the current project. All things considered, there appears to be compatibility between the two sets of data and a remarkable consistency among the nations which lends credence to the data collection and coding methods.

In order to view the data in more comparative detail, a correlational matrix of the same "top" thirty-five nations, with both the 1967 and 1978 correlations shown, was constructed and is at Table 4-2. The data above the diagonal are the 1967 correlations; below the diagonal the 1978 correlations. It can be seen that among the seven 1967 militarism indicators, there were seven strong correlations (those equal to, or exceeding .50). However, the 1978 data only resulted in four such high positive correlations. The first three indicators, those made up of interval data, correlated well with each other. This would seem to imply that the variables in the present study are less tightly correlated than in the 1972 study and would therefore result in less chance

Table 4-2. Correlation Matrix: Militarism Indicators (1967-1978) and Foreign Conflict Values (1967-1968 and 1978-1979)*

Indicator**	1	2	3	4	5	6	7	8	9
1. Defense Expenditures as % of Expenditures for Health & Education		(.51)	(.50)	.20	.16	.40	.28	.43	.41
2. Defense Expenditures as % of GNP	(.91)		(.87)	.32	(.51)	.26	(.70)	(.64)	(.58)
3. Active Military Personnel as % of Economically Active Pop	(.57)	(.71)		.17	(.51)	.20	(.57)	(.61)	(.53)
4. Censorship	.49	.34	.08		.21	.42	.12	.32	.23
5. Method of Recruitment	.37	.44	.44	.15		.13	(.54)	(.54)	.46
6. Involvement of Military	.22	.15	.02	(.60)	-.06		.06	.11	.12
7. Armed Forces Struct	.24	.22	.23	.15	.27	.22		(.64)	(.56)
8. Foreign Conflict Value 1967-1978	.39	(.53)	.40	.04	.10	.15	.28		(.87)
9. Foreign Conflict Value 1968-1979	.48	(.58)	.35	.30	.17	.19	.05	(.69)	

*Correlations above diagonal are 1967 militarism indicators and 1967-1968 foreign conflict scores. Correlations below diagonal are 1978 militarism indicators and 1978-1979 foreign conflict scores.

**Loading $\geq .50$ are in parentheses.

of multicolinearity affecting the findings.

Another interesting observation is that Variable 6, "Involvement of the Military in Politics," correlated much better with "Censorship" in the 1978 data (r = .60) than with the 1967 data (r = .42). Moreover, the same interesting relationships seen in the 1972 study between the "Involvement of the Military in Politics" and "Foreign Conflict" appear again in this study. That relationship was found to be surprisingly low in the 1972 study and the trend continued in the present effort. As was pointed out in 1972, intuitively it would seem that the involvement of the military in politics should correlate much better with foreign conflict, considering the emphasis placed upon this indicator by anti-militarists.[4]

Tables 4-3.1 through 4-3.3 are summaries of the correlation for all three nation groupings computed from the 1978 data with 1978-1979 foreign conflict values. A new variable, not mentioned until now, "Population 1978," is displayed on these matrixes. "Population 1978" appears here because while collecting the 1978 data, the author also coded the total population for each nation. This was done to see if relationships between population and any of the variables, particularly foreign conflict, might appear. As can be seen from an examination of Tables 4-3, population showed a negligible correlation with any of the variables, except for a moderately positive relationship with the 1978 and 1979 foreign conflict values in the "Bottom 35" (Table 4-3.2) grouping of nations. This quickly puts to rest any propositions that large nations engage in foreign conflict more, or less, than others. Instead, there seems to be no correlation at all between population and any of the variables. Tables 4-3 also supports the negligible relationships found between "Involvement of the Military in Politics" and

Table 4-3.1 Correlation Matrixes: Militarism Indicators (1978), Foreign Conflict Values (1978-1979) and Population (1978)

Indicator*	139 Nations 1	2	3	4	5	6	7	8	9	10
1. Defense Expenditures as % of Expenditures for Health & Education		(.68)	.47	.35	.19	.15	.24	.15	.16	.04
2. Defense Expenditures as % of GNP	(.68)		.62	.33	.21	.14	.31	.35	.37	.10
3. Active Military Personnel as % of Economically Active Population	.47	(.62)		.16	.29	.05	.79	.14	.23	- 15
4. Freedom	.35	.33	.16		.03	.48	.01	.09	.15	-.01
5. Method of Recruitment	.18	.21	.29	.33		.14	.35	.22	.17	.01
6. Involvement of Military	.14	.14	.05	.48	.14		.24	.26	.21	-.05
7. Armed Forces Structure	.23	.31	.29	.01	.35	.24		.29	.29	.16
8. Foreign Conflict Value 1968	.15	.35	.14	.09	.22	.25	.29		(.64)	.14
9. Foreign Conflict Value 1979	.16	.37	.23	.15	.17	.21	.29	(-.64)		.19
10. Population 1978	.04	.10	-.10	-.01	.01	-.05	.16	.14	.19	

*Correlations .50 are in parentheses.

Table 4-3.2 Correlation Matrixes: Militarism Indicators (1978), Foreign Conflict Values (1978-1979) and Population (1978)

Indicator*	Bottom 35 Nations 1	2	3	4	5	6	7	8	9	10
1. Defense Expenditures as as % of Expenditures for Health & Education		(.62)	(.54)	.26	.08	.08	.23	.19	.21	.09
2. Defense Expenditures as % of GNP	(.62)		(.62)	.20	.10	-.04	.24	.39	.35	.23
3. Active Military Personnel as % of Economically Active Population	(.54)	(.62)		-.04	.21	.08	.29	.07	.25	-.14
4. Freedom	.26	.20	-.04		-.20	.16	-.15	.15	.21	.12
5. Method of Recruitment	.08	.10	.21	-.20		.21	.08	.36	.15	-.02
6. Involvement of Military	.08	-.04	.08	.16	.21		.14	.24	.26	-.10
7. Armed Forces Structure	.23	.24	.29	-.15	.08	.14		.10	.24	.11
8. Foreign Conflict Value 1978	.19	.39	.07	.15	.36	.24	.10		(.73)	.33
9. Foreign Conflict Value 1979	.21	.35	.25	.21	.15	.26	.24	(.73)		.34
10. Population 1978	.09	.23	-.14	.12	-.02	-.10	.11	.33	.34	

*Correlations $\geq$.50 are in parentheses.

Table 4-3.3 Correlation Matrixes: Militarism Indicators (1978), Foreign Conflict Values (1978-1979) and Population (1978)

Indicator*	Top 35 Nations 1	2	3	4	5	6	7	8	9	10
1. Defense Expenditures as % of Expenditures for Health & Education		.01	(.57)	.49	.37	.22	.24	.39	.48	.10
2. Defense Expenditures as % of GNP	(.92)		(.71)	.34	.44	.15	.22	(.53)	(.58)	.04
3. Active Military Personnel as % of Economically Active Population	(.57)	(.71)		.08	.44	.02	.23	.40	.35	-.12
4. Freedom	.49	.34	.08		.15	(.60)	.15	.04	.30	-.11
5. Method of Recruitment	.37	.44	.44	.15		-.07	.27	.10	.17	-.20
6. Involvement of Military	.22	.15	.02	9.60)	-.07		.22	.15	.19	-.16
7. Armed Forces Structure	.24	.22	.23	.15	.27	.22		.28	.05	.08
8. Foreign Conflict Value 1978	.39	(.53)	.40	.04	.10	.15	.28		(.69)	-.13
9. Foreign Conflict Value 1979	.48	(.58)	.35	.30	.17	.19	.05	(.69)		-.01
10. Population 1978	.10	.04	-.13	-.10	-.20	-.16	.07	-.13	-.01	

*Correlations $\geq$.50 are in parentheses.

"Foreign Conflict" alluded to earlier.

As was done in the 1972 study, factor analysis was performed to better examine these, and other, relationships. An eigenvalue criteria of 1.0, an accepted practice in social science statistical research, was established. This procedure, also done in the 1972 study, retains only those factors representing independent aspects of the information. After factoring, orthogonal varimax rotation was computed. This technique usually causes each indicator to load heavily on only one factor or dimension.

The rotated factor loadings for the thirty-five nations used in the 1972 study compared with the same nations and their loadings on the 1978 data is at Table 4-4. The indicators, in both studies, split on two factors (dimensions) and no single variable loaded heavily on a dimension to the exclusion of the others. In both analyses the two dimensions can be identified by variables with the highest loadings. Since the higher the loadings, the more the variable is associated with that factor, or dimension, the variables with the highest loadings were used to describe the dimensions. Such descriptions should not be confused with causality. Rather, they are adjectival descriptions used to ease identification and to assist in pursuing relationships. The two dimensions were labeled "Development" and "Political" in the 1972 study and were carried forward to this study. In both studies one dimension ("Development") seems to pull together variables relating to socio-economic development and on the other dimension ("Political), variables appear which are determined by the ruling regime.

Interestingly, one of the variables (Defense Expenditures as a Percentage of Expenditures for Health and Education) migrated between the two dimensions in the two studies. This appears to be a logical

Table 4-4. Rotated Factor Matrix as of Seven Indicators of Militarism, 35 Nations for 1967 and 1978 Data[a]

Indicator	1967[b] F_1 Development	1967[b] F_2 Political	1967[b] h^{2c}	1978[b] F_1 Development	1978[b] F_2 Political	1978[b] h^{2c}
1. Defense Expenditures as % of Expenditures for Health & Education	.40	(.58)	.58	(.81)	.39	.81
2. Defense Expenditures as % of GNP	(.88)	.33	.87	(.90)	.24	.86
3. Military Personnel as % of Economically Active Population	(.86)	.24	.79	(.84)	-.04	.71
4. Freedom	.08	(.72)	.53	.19	(.86)	.77
5. Recruitment	(.66)	.05	.52	(.69)	-.09	.49
6. Military Involvement in Politics	.02	(.86)	.74	-.05	(.89)	.80
7. Military Structural Orientation	(.85)	-.01	.72	.34	.27	.18
% Total Variance	41.6	25.3	66.9	44.7	21.6	66.3
% Common Variance	62.2	37.8	100.0	67.4	32.6	100.0
Eigen Value	3.3	1.3	n/a	3.13	1.5	n/a

[a]Loadings greater than .50 are shown in parentheses.

[b]Varimax rotation.

[c]Communality, h^2, of a variable is the sum of the squares of the loadings across the factors for the orthogonally rotated solutions.

evolution since the thirty-five nations have become wealthier in the eleven years between the two studies. The last variable, "Military Structural Orientation," did not load on either dimension in the current analysis. No adequate explanation can be given for this or to its very low communality (h^2). Compared to the 1972 study, neither of these changes, however, significantly alters the conclusions of the factor analyses which clearly show that the first dimension, "Development," is by far the stronger in both studies and, in replication, becomes stronger.

Tables 4-5 and 4-5.1 display the rotated factors for all three nation groupings based on their 1978 data. The "139 Nation" grouping, and the "Bottom 35" grouping, now show three dimensions. A "Development" dimension still appears which collects the three interval data variables, and, as was stated above, is the strongest dimension. Although not as clear in the "Bottom 35" grouping, the "Political" dimension loaded next. The third, and new, dimension cannot be cleanly labeled since different variables load on it for the "139 Nation" and "Bottom 35" nation groupings; however, for convenience, it has been titled "Military."

At this point it might be well to review one of the conclusions of the 1972 study which was that if the chosen variables represented militarism, then the dimensions with the highest common variance between them would be the ones which best describe a militarized nation. All three nation groupings in this study, and the thirty-five sample in the 1972 study, found the strongest dimension to be the "Development" dimension. The "Development" dimension contains the interval variables which measure the social-economic demands of the society. Thus, it can again be concluded that a militarized society is best measured by examination

Table 4-5. Rotated Factor Matrixes of Seven Indicators of Militarism for 1978 Data--Three Iterations

	139 Nations				Top 35 Nations		
	Development (F_1)	Political (F_2)	Military (F_3)	h^2	Development (F_1)	Political (F_2)	h^2
1. Defense Expenditures as % of Expenditures for Health & Education	(.83)	.20	.06	.73	(.81)	.39	.81
2. Defense Expenditures as % of GNP	(.87)	.14	.15	.82	(.90)	.24	.86
3. Military Personnel as % of Economically Active Population	(.77)	-.06	.28	.68	(.84)	-.04	.71
4. Freedom	.33	(.81)	-.17	.80	.19	(.86)	.77
5. Recruitment	.14	.01	(.78)	.63	(.69)	-.09	.49
6. Military Involvement in Politics	-.06	(.87)	.27	.83	-.05	(.89)	.80
7. Military Structural Orientation	.18	.09	(.80)	.67	.34	.27	.18
% Total Variation	39.2	18.6	.16	73.9	44.7	21.6	66.3
% Common Variation	53.1	25.2	21.7	100.0	67.4	32.6	100.0
Eigen Value	2.74	1.3	1.12	n/a	3.13	1.51	n/a

Loadings $\geq$.50 are in parentheses.
Varimax rotation.
h^2 = communality.

Table 4-5.1. Rotated Factor Matrixes of Seven Indicators of Militarism for 1978 Data--Three Iterations

	Bottom 35 Nations			
	Development (F_1)	Political (F_2)	Military (F_3)	h^2
1. Defense Expenditures as % of Expenditure for Health & Education	(.83)	.19	.09	.74
2. Defense Expenditures as % of GNP	(.88)	.07	-.07	.78
3. Military Personnel as % of Economically Active Population	(.81)	.23	.08	.72
4. Freedom	.19	(.83)	.20	.84
5. Recruitment	.13	(-.53)	(.52)	.84
6. Military Involvement in Politics	.01	.11	(.92)	.86
7. Military Structural Orientation	.41	-.41	.17	.37
% Total Variation	34.3	19.2	16.2	69.7
% Common Variation	49.2	27.6	23.2	100.0
Eigen Value	2.4	1.34	1.13	n/a

Loadings $\geq$ .50 are in parentheses.
Varimax rotation.
h^2 = communality

of those social-economic variables, not military forces or political involvement of the military.

It was stated in Chapter II that most authors who write about militarism allege that a militarized nation will be involved in foreign conflict more than one that is not militarized. The next step in our research effort is to examine that proposition. In order to do that, two techniques were adopted, factor scoring and regression analysis.

Factor scoring makes use of the above findings, that when the militarism variables are factor analyzed, dimensions appear which have certain "weight." This weight is the common variance the dimension has on the overall computations. Within each dimension, each variable also has a weight based upon its relative strength in that dimension.

To assess the relative strength of each dimension ("Development, Political, Military") factor weights were determined for each variable and factor scores, one for each dimension, computed. This gave each nation a score on each of the three analyses of the 1978 data. Factor scores were derived by weighing each indicator proportionately to its involvement in a dimension: the more involved a variable, the higher the weight. Those variables not related to a dimension were weighted near zero. A score for a nation was determined by multiplying the data for each indicator by the dimension's weight for that indicator. Nations have high or low factor scores as their values are high or low on the indicators of the dimension. Support for this technique is found in Jack E. Vincent's monograph on factor analysis. "It is the opinion of this researcher that factor scores are not only an important ingredient of the basic analysis but shed a great deal of light on the nature and value of factor analysis itself."[5]

To illustrate the significance of the "Development" dimension in

the 1972 study, a modified correlation matrix of the two dimensions, "Development" and "Political," with the foreign conflict values for 1967 and 1968, is shown at Table 4-6. The matrix demonstrates the strength of the economic and social variables when correlated with each year's foreign conflict values. The "Development" dimension can be seen to account for over ninety percent of the common variance between the two dimensions in 1967-1968 and lends support to the conclusions reached earlier for those 35 nations.

However, when the same effort was tried for the 1978-1979 foreign conflict values, the resulting relationships were not as strong as can be seen in Table 4-7. Although the "Development" dimension still dominated, it did not correlate as well with foreign conflict. In fact, if the "Top 35" grouping is not considered, Factor 3 (the "Military" dimension) correlates better with foreign conflict in three of the four years. However, except for the "Development" dimension of the "Top 35" grouping, no dimension really stood out as being very strongly correlated with foreign conflict.

Another important finding, which goes along with the previous one, is that the second dimension, "Political," consisting of the variables "Freedom" and "Military Involvement in Politics," does <u>not</u> correlate well in <u>any</u> respect with foreign conflict. These two significant findings, then, that "Development" is tied to foreign conflict only for the "Top 35" and that the "Political" dimension does not correlate well with foreign conflict, modify the conclusions of the 1972 study. In that research, it was felt that if the variables used could sample a nation's militarism, and militarism led to foreign conflict, then militarism could be measured by the "Development" dimension, that is the socio-

Table 4-6. Correlation and Variation Matrix: Dimensions of Militarism and Foreign Conflict Values, 35 Nations

Dimension	Foreign Conflict Value			
	1967		1968	
	r	Common r^2 Variance[a] (%)	r	Common r^2 Variance[a] (%)
1. Development	.70	.49 (90)	.62	.38 (90)
2. Political	.21	.04 (10)	.19	.04 (10)
Percent variation in foreign conflict values accounted for by the two dimensions		.53 (100)		.42 (100)

[a]Variation among all the variables involved in a pattern as a percent of that involved in all the patterns.

Table 4-7. Correlation and Variation Matrixes: Dimensions of Militarism and Foreign Conflict Values--Three Iterations

139 Nations

Dimension	Foreign Conflict Value					
	1978			1979		
	r	r^2	Common Variance* (%)	r	r^2	Common Variance* (%)
1. Development	.17	.03	(21)	.24	.06	(40
2. Political	.16	.03	(22)	.16	.03	(20)
3. Military	.29	.08	(57)	.25	.06	(40)
		.14	(100)		.15	(100)

Top 35 Nations

Dimension	Foreign Conflict Value					
	1978			1979		
	r	r^2	Common Variance* (%)	r	r^2	Common Variance* (%)
1. Development	.43	.18	(95)	.44	.19	(76)
2. Political	.12	.01	(05)	.25	.06	(24)
		.19	(100)		.25	(100)

Bottom 35 Nations

Dimension	Foreign Conflict Value					
	1978			1979		
	r	r^2	Common Variance* (%)	r	r^2	Common Variance* (%)
1. Development	.25	.06	(35)	.33	.11	(55)
2. Political	.01	.01	(6)	.06	.01	(5)
3. Military	.32	.10	(59)	.28	.08	(40)
		.17	(100)		.20	(100)

*Variation among all the variables involved in a pattern as a percent of that involved in all the patterns.

economic variables. Now it appears that this proposition holds only for the more developed nations, not for all the nations of the world and specifically not to the lesser developed nations. The corollary is that the "Political" dimension continues to have little relationship with foreign conflict.

A desired by-product of these research efforts has been to try to identify a possible model which could be used to predict foreign conflict from the seven variables of militarism. Since factor scoring did not provide a conclusive method of forecasting the combativeness of a nation on a single dimension, regression analysis of the seven indicators against foreign conflict was conducted. Regression analysis is a commonly used statistical method for predicting a dependent variable from two or more independent variables. Regression analysis results in the computation of a multiple correlation coefficient (R) which can then be used to determine the proportion of the variance (R^2) in the dependent variable (in this case foreign conflict behavior) "explained" by the independent variables (the measures of militarism).[6]

Two different sets of independent variables (predictors) were tested in order to arrive the best regression correlation coefficient of predictor to behavior. The first set of predictors consisted of the raw data for the seven indicators of militarism (See Appendix C). The second set of predictors was each nation's factor scores on the "Development," "Political," and "Military" dimensions which had been determined from the earlier factor analyses. The results of the analyses demonstrated that multiple regression, using the seven indicators as predictors, produced a higher R for both years than when factor scores were used as predictors. The R^2 with either set of predictors, however, was somewhat below desired and less than that achieved in the 1972

study. Table 4-8 reviews the results and also shows the results of the 1972 study for comparisons. To conclude this overview of prediction, it can be seen that for the developed nations, (the "Top 35"), foreign conflict was predicted with greater accuracy than for the other two groupings of nations when using the 1978 data to predict foreign conflict for 1978 and 1979.

In this chapter, a statistical analysis of the research has been displayed and discussed. The moderate success of the 1972 study, which used factor scores to predict foreign conflict, could not be supported by the results of replication. This was caused by the fact that when different nation groupings were examined against the new data and for different years, other dimensions correlated better with foreign conflict than the "Development" dimension. Although the socio-economic variables seemed to "explain" the foreign conflict relationships for the developed 35 nations used in both studies, other dimensions correlated better with foreign conflict for the "Bottom 35" and the total of 139 nations. Regression analysis of the militarism indicators produced slightly better results when used to predict foreign conflict than when factor scores were used. However, no more than forty-two percent of the conflict could be predicted in any given year, and that only for the "Top 35" nations. For the "139 Nation" grouping, only twenty-one percent could be predicted.

This research has, up to this point, resulted in accomplishing all four of its objectives. First, correlation and analysis of the data has supported the hypothesis that militarism (as measured by the indicators in Chapter II) and foreign conflict are associated. Second, a militarized nation can be identified by examining the dedication of

Table 4-8. A Comparison of the Results of Regression Analysis Using Militarism Indicators and Factor Scores to Predict Foreign Conflict

Top 35 Nations

Predictor	Year			
	1967[a]	1968[a]	1978[b]	1979[b]
Militarism Indicators as Predictors	$R = .78$ $R^2 = .60$	$R = .67$ $R^2 = .44$	$R = .64$ $R^2 = .41$	$R = .65$ $R^2 = .42$
Factor Scores as Predictors	$R = .73$ $R^2 = .54$	$R = .66$ $R^2 = .42$	$R = .44$ $R^2 = .19$	$R = .50$ $R^2 = .25$

Predictor	139 Nations		Bottom 35 Nations	
	Year		Year	
	1978[b]	1979[b]	1978[b]	1979[b]
Militarism Indicators as Predictors	$R = .48$ $R^2 = .23$	$R = .46$ $R^2 = .21$	$R = .62$ $R^2 = .38$	$R = .50$ $R^2 = .25$
Factor Scores as Predictors	$R = .37$ $R^2 = .14$	$R = .37$ $R^2 = .14$	$R = .41$ $R^2 = .17$	$R = .44$ $R^2 = .19$

[a]Based on 1967 data used in 1972 study.

[b]Based on 1978 data used in current study.

socio-economic resources to the military as opposed to a nation's political attributes. Third, the use of the data as a possible predictor of foreign conflict behavior has been examined. However, as observed in the 1972 study, the keen insight of Quincy Wright is still applicable: "An analysis of the factors of war and of their relationships is possible, but such an analysis does not permit precise prediction."[7] Finally, a desired aim of the research was to replicate the 1972 study of militarism. This has now been accomplished and the results modify the conclusions of that study and help to make them more meaningful. One reason for this is that the findings herein reveal that different clusterings of the militarism indicators occur when nations are examined by political/economic development. Thus, it may be concluded that a nation's social, economic, political and military attributes play different roles in determining foreign conflict depending upon the state's development as measured and regionalized by the procedures in Chapter III.

CHAPTER IV

ENDNOTES

1. David G. Hansen, Major, Militarism and Foreign Conflict Behavior.

2. For those who do not understand factor analysis, it is recommended they consult R. J. Rummel, "Understanding Factor Analysis" in Journal of Conflict Resolution, December 1967, pp. 444-480.

3. Norman H. Nie, et. al., eds., Statistical Package for the Social Science, 2d Edition.

4. Hansen, p. 61-62.

5. Jack E. Vincent, "Factor Analysis as a Research Tool in International Relations" an unpublished paper prepared for delivery at the Sixty-Fifth Annual Meeting of the American Political Science Association, New York City, New York, September 2-6, 1969, p. 9.

6. A succinct explanation of multiple regression is contained in G. David Garson, Handbook of Political Science Methods, pp. 195-199.

7. Quincy Wright, A Study of War, p. 336.

CHAPTER V

SUMMARY, CONCLUSIONS AND OBSERVATIONS

This research has outlined a method of investigation, and some findings, about a phenomenon known as "militarism." Much has been written about militarism; however, little, or no, quantitative research has been used to investigate it. For many years authors have alleged that militarism is expressed in the armies, cultures, economies and the politics of societies. Militarism has been assailed as masquerading in various guises, but aggressive foreign conflict behavior is reputed to be one of its manifestations and the evidence of its presence.

Based on a study done in 1972[1], this research surveyed the political, cultural and economic qualities of nations and used seven indicators to profile a nation's militarism. It was postulated that a nation possessing the traits of militarism, as measured by the seven indicators, would be more aggressive than a nation in which the indicators were not as pronounced.

Foreign conflict behavior was scaled by using conclusions from previous studies dealing with the subject.[2] Analysis of how actions which represented foreign conflict behavior clustered into dimensions when subjected to factor analysis permitted those actions to be assembled into a scale with the limits described by less aggressive foreign conflict behavior (diplomatic actions) at the one extreme and intensive

conflict behavior (war-like actions) at the other. The scale, numerically graduated from 8 to 12, became a foreign conflict index used to assign foreign conflict values to the nations in the study. The values were determined by a review of each nation's behavior for two years: 1978 and 1979. Data detailing the indicators of militarism and foreign conflict were collected. The raw data is displayed at Appendix C.

The seven militarism indicators, when subjected to factor analysis, emerged on two dimensions in the 1972 study. The same two dimensions resulted when the method was replicated for the identical thirty-five nations based on 1978 data. However, when the number of nations was expanded to 139, and a different sampling of thirty-five nations at the other end of the development spectrum was examined, three, not two, dimensions appeared. One dimension, labeled "Development," because it appeared to gather the economic and social attributes of militarism, was common to all the analyses. This dimension was also the stronger in every factor analysis. Therefore, when nations were examined for characteristics of militarism in this study, it was found that careful attention must be paid to the social-economic variables - those identified in the "Development" dimension.

Since the purpose of the study was to determine if, and how much, militarism and its indicators contributed to foreign conflict, it was necessary to look at those relationships. When the dimensions found in the factor analysis were analyzed against foreign conflict, different correlations appeared depending upon the nation grouping involved. For example, when the "Top 35" nations (the same ones used in the 1972 study) were correlated with foreign conflict, the "Development" dimension showed strong relationships. But, the "Military" dimension corre-

lated stronger than the "Development" dimension when looking at the 139 nation grouping and at the "Bottom 35" grouping. The one consistent fact was that the dimension labeled "Political" did not correlate well with foreign conflict in any of the eight analysis. It can be concluded that those variables identified in the "Political" dimension have little to do with a nation's propensity for foreign conflict.

Regression analysis of the 1978 factor scores and the indicators of militarism resulted in 1978 and 1979 foreign conflict behavior not being predictable with any degree of reliability. It was hoped that foreign conflict could have been predicted at least as successfully as was done in the 1972 study but, such was not the case. However, the results of this effort should not be dismissed since the ability to predict forty, or more percent of a nation's foreign conflict on a thirteen point scale for the succeeding year, based on the aggregation of seven or less variables, appears to have some value. One probable reason for the less satisfactory prediction results of the 139 nation grouping and the Bottom 35 nation grouping, when compared to the Top 35 nations, was the use of unreliable data. The more developed a nation, the more reliable and current its raw data. Thus, by careful choice of data sources, the predictability of foreign conflict could be refined and made more accurate than demonstrated here in this elementary effort. Surely this finding has potential for appropriate intelligence agencies interested in developing a quantitative method of ascertaining a nation's future conflict behavior.

Some concerns which surfaced during the research should be mentioned here. First, the use of interval and ordinal data together as indicators of militarism appears to be adding "apples and oranges." In defense of the effort, it should be noted that every attempt was made to

quantify each of the indicators; however, the data was much too subjective. There is little debate that the data did or did not reveal the condition of "militarism" in a nation, but perhaps a more satisfactory statistical technique should have been chosen to examine the ordinal data, such as Chi Square. The use of Chi Square could result in the examination of the significance, association and validity of the data better than factor analysis.

Coupled with the above problems, the difficulty in arriving at good foreign conflict values arises. The categories of conflict used in the study were not designed to measure conflict on a continuum of "none" to "most." Rummel and Tanter used the definitions for event analysis. As was discussed in Chapter III, perhaps another dimension operates, "cooperation," which could not be adequately explored in this research. Subsequent efforts in this area of comparing indicators of militarism and foreign conflict may want to reduce the conflict variables to three or four general categories, being guided by the dimension of conflict (war, diplomatic action, and belligerence) discussed in Chapter III. By use of such a coding technique, and better analytical statistical methods such as Chi Square, the data analysis would be enhanced.

While collecting the data for this research, it became clear that nations respond to international stimuli regionally. By that it is meant that within a region, consisting of blocks of nations, those nations often react beyond what could be considered "normal" behavior patterns. Often they seem to respond at a level that is beyond their capability to sustain or prove credible. Three events occurred in 1978 and 1979 which illustrate the point; in Central America the Nicaraguan political situation resulted in many Latin American states responding to

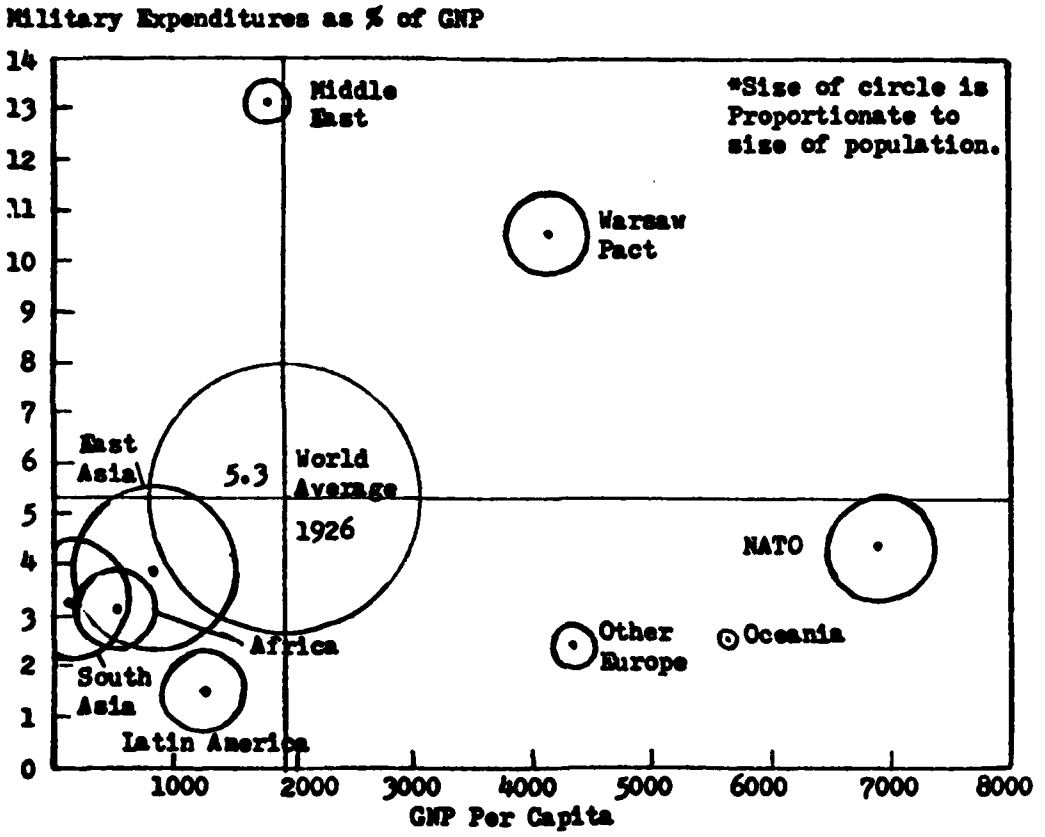
actions beyond their ability to sustain them; Vietnam's invasion of Kampuchea caused harsh responses from many of the region's states, who obviously feared for their national integrity, and acted much more aggressively than was believable; Egypt President Sadat's accord with Israel was met with vitriolic responses and the serverance of diplomatic relations by many of the Arab states — an overreaction since the Arab nations soon cooled and in most instances re-established relations with the Sadat government.

Along with the overreaction of nations to regional stimuli, there was a clear pattern for nations to group with regards to economic and political data. This was suggested in Chapter II, Selection of the Nations. Figures 5-1 and 5-2 demonstrate this tendency to cluster on data other than that used in Chapter III.

Future researchers would do well to examine these regional grouping characteristics and do a comparative analysis of it to forms of government. Wilkenfeld has done a good deal of work in quantitatively identifying nations by forms of government and his effort could easily be modified to do what is suggested.[3]

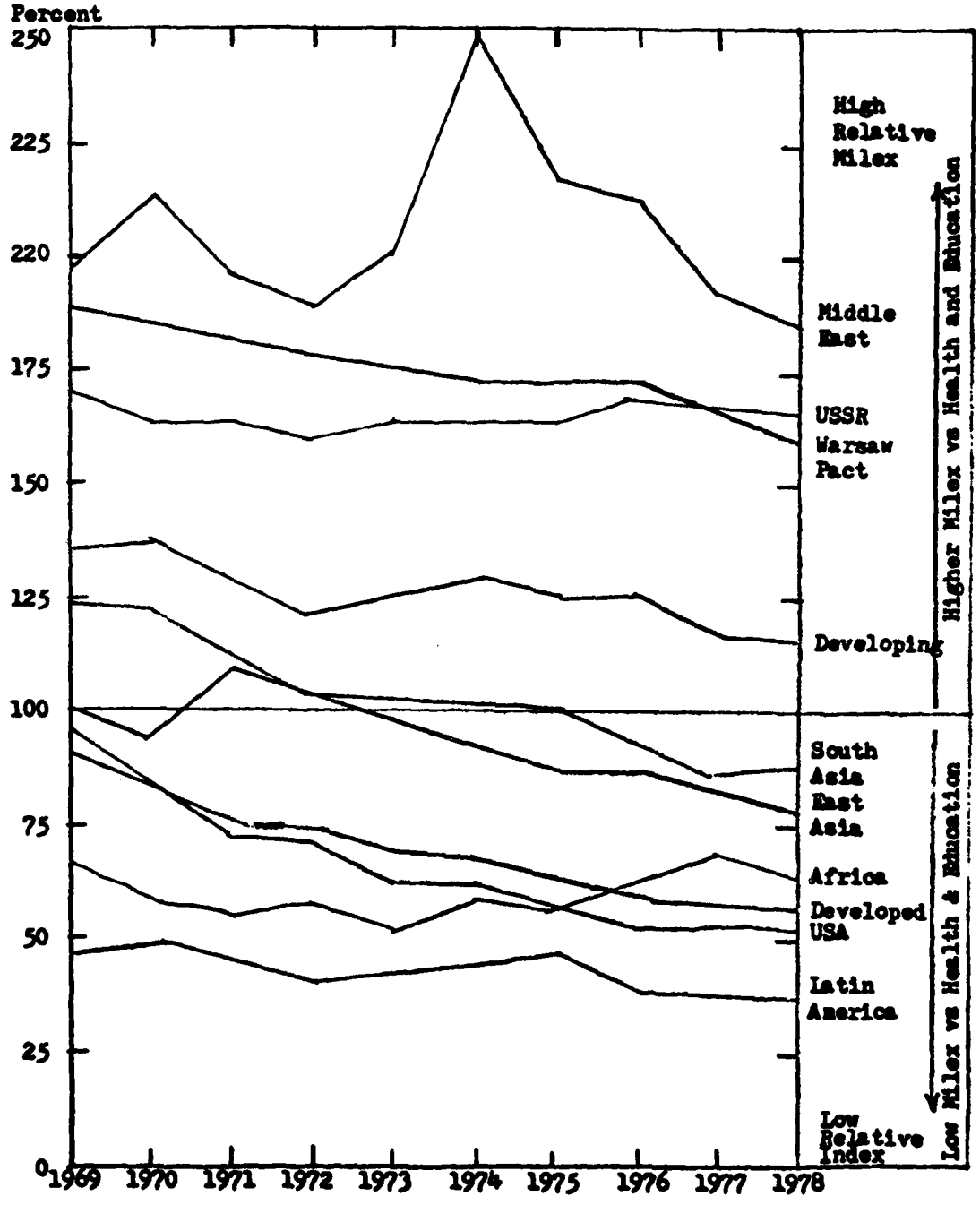
Finally, mention must be made of the sources. Weinstein makes an excellent summary of the problems of single versus multiple sources for events data.[4] It became very obvious as the research was being conducted that multiple sources were required for the conflict data. Too many instances arose where the New York Times Index completely ignored an event well reported in Keesing's, or vice versa. Deadline Data on World Affairs also reported frequently, and in depth, on events which had only been casually mentioned in Keesings or the New York Times Index. The use of multiple sources in this research provided a very objective analysis of foreign conflict, better than if only one

Figure 5-1. Regions Arrayed by Military Expenditure as Percent of GNP and GNP Per Capita, 1978*



Source: World Military Expenditures and Arms Transfers 1969-1978, p. 7.

Figure 5-2. Military Expenditures as a Percentage of Combined Health and Education Expenditures.



Source: Adapted from World Military Expenditures and Arms Transfers 1969-1978, p. 5.

source had been used. In aggregating the militarism data, access to classified data was not attempted. It is quite possible that appropriate intelligence agencies have more current and accurate information available and could thus eliminate the biases of using open sources from international reporting organizations such as the United Nations or the International Labour Organization.

Another valuable suggestion which would enhance the conduct of future research efforts is to use a panel of geographic or regional experts (area specialists) to analyze the variables of Military Involvement in Politics and Military Structural Orientation. This would eliminate the bias of an individual researcher and place the matters in the hands of persons who have an intimate and first-hand knowledge of the nation/region. Further, the panels would also be used to validate other codings and identify possible errors or omissions.

This research has resulted in the replication of an earlier study of militarism and has supported some of its conclusions. Both studies have examined the empirical generalizations surrounding the phenomenon known as "militarism" and coupled it to quantitative analysis. The results are encouraging but mixed and indicate that further quantitative research into the mystery of militarism is warranted. The studies reveal that the subject is far too complex to be given all the blame or credit that is heaped upon it, which, like the weather, everyone talks about, but no one does anything about. Maybe these two studies are the first steps to quantitatively examine the subject in hopes of doing more than just talking about "militarism."

CHAPTER V

ENDNOTES

1. David G. Hansen, Maj., Militarism and Foreign Conflict Behavior.

2. See, for example, R.J. Rummel, The Dimensions of Nations, pp. 16-26.

3. Jonathan Wilkenfeld, Conflict Behavior & Linkage Politics pp. 107-123.

4. John M. Weinstein, A Vector Analytic Approach to International Systems Conflict, pp. 219-221.

APPENDIX 1

SCALE OF CIVIL LIBERTIES*

In countries rated (1) publications are not closed because of the expression of rational political opinion, especially when the intent of the expression is to affect the legitimate political progress. No major media are simply conduits for government propaganda. The courts protect the individual; persons are not imprisoned for their opinions; private rights and desires in education, occupation, religion, residence, and so on, are generally respected; law-abiding persons do not fear for their lives because of their rational political activities. There are, of course, flaws in the liberties of all of these states, and these flaws are significant when measured against the standards these states set themselves.

Movement down from (2) to (7) represents a steady loss of the civil freedoms detailed. Compared to (1), the police and courts of states at (2) have more authoritarian traditions. In some cases they may simply have a less institutionalized or secure set of liberties, such as in Portugal or Greece. Those rated (3) or below may have political prisoners and generally varying forms of censorship. Too often their security services practice torture. States rated (6) almost always have political prisoners; usually the legitimate media are completely under government supervision; there is no right of assembly; and, often,

travel, residence, and occupation are narrowly restricted. However, at (6) there still may be relative freedom in private conversation, especially in the home; illegal demonstrations do take place; underground literature is published; and so on. At (7) there is pervading fear, little independent expression takes place in private, almost no expressions of opposition emerge in the police-state environment, and execution is often swift and sure.

---

*Source: Freedom at Issue, January/February, 1981, p. 6.

APPENDIX 2

FOREIGN CONFLICT INDICATOR CRITERIA*

1. Protest: Any official diplomatic communication or governmental statement by the executive leaders of a country which has as its primary purpose to protest against the actions of another nation.

2. Accusation: Any official diplomatic or governmental statement by the executive leaders of a country which makes a charge or allegation against another country (or group of countries). Denunciations are included as are derogatory statements about the character of another nation, its people, or leaders.

3. Expulsion or Recall of Lesser Officials: Any expulsion of diplomatic officials from another country of lesser than diplomatic rank (see Indicator 5 below) or any recalling of such officials for other than administrative reasons. This does not include any expulsion or recall involved in the severance of diplomatic relations.

4. Negative Sanction: Any act on the part of government which has as its purpose the punishment of another country for its behavior. This includes such acts as boycotts, withdrawal of military or economic aid, freezing of assets, embargo, or limitation of movement

---

*These criteria are listed in Rudolph J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations," General Systems (Yearbook of the Society for General Systems Research), 8:26-27, 1963.

of the other's nationals within the country. Negative sanctions do not include expulsion or recall of diplomats, severance of diplomatic relations, military action or war.

5. Expulsion or Recall of Ambassador: Any expulsion of an ambassador from another country, or any recalling for other than administrative reasons an ambassador to another country. This does not include any expulsion or recall involved during the severance of diplomatic relations.

6. Threat: Any official diplomatic communication or governmental statement by the executive leaders of a country which states or implies that a particular country (or group of countries) will incur certain negative sanctions if it acts in a certain way. Such negative sanctions may not only include those mentioned under "negative sanctions" above, but also severance of diplomatic relations or the use of force.

7. Anti-Foreign Demonstration: Any demonstration or riot by more than 100 people directed at a particular foreign country (or group of countries) or its politics. This includes attacking an embassy, legation, or information office of another country, or attacking for political reasons either foreign nations on the street or their property (e.g., plantations). This also includes the gathering of more than 100 people to hear speeches and to march in protest against the policy of another country. Demonstrations and riots against the foreign occupying authority in the occupied part of a country are considered anti-foreign demonstrations. Also included in this category are strikes against the goods of another nation, either by dock workers or consumers, and attack on border posts by unofficial irregular groups (e.g., the Irish Republican Army), organized and armed not to engage the established government

but to resist the encroachment of a foreign nation.

8. Troop Movement: Any rapid movement to or massing of large bodies of troops, naval units, or air squadrons in a particular area for the purpose of deterring the military action of another nation, gaining concessions, or as a show of strength. Such movement may take place within a nation, or to or between overseas bases or positions.

9. Severance of Diplomatic Relations: The complete withdrawal from all formal diplomatic relations with another country.

10. Military Action: Any action by members of the regular forces of a nation which are directed against the property or citizens of another country and in which fire power is used. When the number of soldiers of a nation involved in the action equals or exceeds in number .02 percent of the population of the country, then that action is categorized as a war for that country. Military action includes any attack on coastal shipping by gunboats, any attack on a foreign place by one's own planes or anti-aircraft batteries, shelling of another's territory, or exchange of gunfire between border patrols.

11. Mobilization: Any rapid increase in military strength through the calling up of reserves, the activation of additional military units, or the de-mothballing of military equipment, which is directed at another country (or group of countries). A rapid increase which is due to change in policy consequent on the change of government is not counted. The declaration of a state of emergency with respect to another country is categorized as mobilization.

12. War: Any military action for a particular country in which the number of its soldiers involved equal or exceed .02 percent of its population. This number need not be actually involved in the shooting, but must be involved at the front logistically or as reserves.

APPENDIX 3

Militarism Data for 1978 and Foreign Conflict Behavior Values, 1978 and 1979, Population, 1978. Raw Data.

Nation and Code Number	Defense Exp. as % of Exp. for Health & Educ.	Defense Expenditures as % of GNP	Active Mil. Pers. as % of Econ. Active Population	Censorship	Method of Recruitment	Involvement of Mil. in Politics	Mil. Structural Orientation	Conflict Values		Pop. 1978 (000)
								1978	1979	
1 Afghanistan	073	02.6	03.0	7	2	4	3	04	02	020470
2 Argentina	086	02.1	01.3	5	3	5	8	05	05	026390
3 Albania	124	07.8	03.9	7	3	3	4	02	02	002710
4 Algeria	025	04.5	02.1	6	2	5	4	03	06	018420
5 Belgium	035	02.5	02.2	1	2	2	4	10	01	009930
6 Angola	069	04.0	01.9	7	2	4	2	10	10	006300
7 Australia	024	02.9	01.1	1	1	2	5	02	06	014200
8 Austria	011	01.5	01.1	1	3	2	4	01	00	007900
9 Bahamas	000	00.0	00.0	2	1	1	1	00	00	000222
10 Bahrain	067	02.5	01.7	4	1	1	2	00	06	000345
11 Bangladesh	064	02.2	00.4	4	1	4	3	01	08	082450
12 Sri Lanka	019	01.0	00.3	3	1	2	3	00	00	014420
13 Chile	037	07.7	02.3	5	3	5	4	05	02	011060
14 Barbados	002	00.4	00.0	1	1	1	1	00	00	000273
15 Benin	021	01.9	00.2	7	1	5	2	01	00	003400
16 Bolivia	040	03.6	01.5	2	8	5	3	07	04	006100
17 Costa Rica	009	00.7	00.4	1	1	1	1	06	07	002129
18 Botswana	041	03.6	00.9	3	1	1	1	02	02	000744
19 Brazil	022	01.2	00.7	4	3	4	5	01	06	115850
20 Czechoslovakia	088	33.7	02.5	6	3	3	4	00	02	015070
21 Denmark	017	02.4	01.3	1	3	2	4	01	00	005104
22 Bulgaria	142	02.3	03.2	7	3	3	4	07	02	008850
23 Burma	153	03.5	01.3	6	1	5	3	01	00	032782
24 Burundi	050	02.2	00.2	6	1	5	3	00	00	004088
25 Finland	012	01.4	01.8	2	3	3	4	02	01	004770
26 Cameroon	033	01.9	00.2	5	2	4	2	00	00	007300
27 Canada	016	02.0	00.7	1	1	2	5	02	07	023499
28 Chana	021	02.2	00.5	4	1	5	8	07	00	010680
29 Cent. Af. Emp.	040	02.2	00.1	7	2	4	2	00	01	002225
30 Chad	176	03.4	00.3	6	2	5	2	09	02	004425
31 China, PRC	124	10.0	00.1	6	2	3	4	10	10	958000
32 China, ROC	844	08.3	05.4	4	3	3	4	02	01	017500
33 Columbia	029	00.9	01.0	3	2	3	4	00	00	026520

Nation and Code Number	Defense Exp. as % of Exp. for Health & Educ.	Defense Expenditures as % of GNP	Active Mil. Pers. as % of Econ. Active Population	Censorship	Method of Recruitment	Involvement of Mil. in Politics	Mil. Structural Orientation	Conflict Values 1978	Conflict Values 1979	Pop. 1978 (000)
34 Hungary	096	05.5	02.2	5	3	3	4	00	01	010684
35 Congo	042	06.0	01.4	6	1	5	2	00	00	001470
36 India	078	03.5	00.2	2	1	2	4	00	00	635440
37 Cuba	039	09.3	05.6	6	3	5	4	10	10	009870
38 Iran	178	13.2	04.2	5	3	3	5	03	07	039330
39 Iraq	197	13.0	06.8	6	3	3	4	07	07	012470
40 Cyprus	049	14.7	04.9	4	2	1	2	02	00	000625
41 Israel	229	23.3	13.0	2	3	3	5	12	10	003730
42 Domincan Rep.	057	01.2	01.2	2	1	3	3	00	00	005130
43 Ecuador	051	01.9	01.1	3	2	4	3	02	06	007790
44 Egypt	155	15.6	03.7	5	3	4	5	07	07	039760
45 Japan	009	01.3	00.4	1	1	2	4	01	02	115120
46 El Salvador	030	01.4	00.2	4	1	3	3	01	04	004523
47 Equador	054	01.9	00.2	5	1	2	3	02	00	014870
48 Equit. Guinea	024	05.1	02.1	7	1	3	1	00	00	000239
49 Ethopia	120	07.4	00.7	7	2	5	4	10	10	030992
50 Fiji	006	00.5	00.6	2	1	1	2	00	00	000620
51 France	033	04.7	02.2	2	2	3	5	10	10	053850
52 Gabon	190	00.5	00.5	6	1	2	2	00	00	000115
53 Gambia	000	00.0	00.0	2	1	1	1	00	00	000569
54 Germany, East	089	05.8	01.8	6	2	3	4	01	01	016830
55 Germany, West	032	03.4	01.8	2	2	2	4	00	01	064410
56 Greece	127	05.8	05.0	2	2	4	4	01	01	009280
57 Guatemala	035	01.3	00.7	4	2	5	3	01	01	006320
58 Guinea	038	01.4	00.4	7	2	3	2	00	00	004470
59 Mexico	01	00.7	00.5	4	1	3	3	00	01	066770
60 Morocco	084	07.1	01.9	4	2	3	3	03	06	018590
61 Netherlands	041	04.0	02.1	1	3	2	4	01	00	013950
62 New Zealand	016	01.8	01.0	1	1	2	4	03	01	003190
63 Guyana	016	01.9	00.8	3	2	3	2	01	01	000840
64 Haiti	061	01.1	00.1	6	1	2	3	00	00	005536
65 Nigeria	151	07.8	00.5	3	1	4	3	00	00	068290
66 Honduras	038	02.4	01.4	3	1	5	8	00	00	003400
67 Iceland	000	00.0	00.0	1	1	1	1	00	00	000224
68 Panama	007	00.8	01.4	5	1	5	3	00	06	001835
69 Indonesia	108	03.9	00.5	5	2	4	3	00	00	139300
70 Ireland	013	02.0	05.3	1	1	2	3	02	02	003240
71 Philippines	117	03.4	00.7	5	2	4	3	00	00	046600
72 Italy	022	02.6	01.7	2	3	3	4	01	07	057070
73 Ivory Coast	013	02.3	00.2	5	2	2	2	00	01	067090

Nation and Code Number	Defense Exp. as % of Exp. for Health & Educ.	Defense Expenditures as % of GNP	Active Mil. Pers. as % of Econ. Active Population	Censorship	Method of Recruitment	Involvement of Mil. in Politics	Mil. Structural Orientation	Conflict Values 1978	Conflict Values 1979	Pop. 1978 (000)
74 Jamaica	007	00.8	00.2	3	1	2	2	01	00	002130
75 Jordan	205	16.4	16.3	6	2	4	4	00	06	002970
76 Korea, North	218	10.5	07.4	7	3	3	5	01	01	017170
77 Korea, South	197	08.3	07.4	5	3	4	5	01	01	035940
78 South Africa	111	06.0	00.7	6	2	3	4	10	10	027580
79 Kuwait	130	02.8	03.9	3	3	2	4	00	06	001160
80 Laos	389	11.2	03.0	7	3	4	3	06	02	003450
81 Sweden	023	03.6	01.6	1	3	2	4	01	02	008290
82 Switzerland	028	02.6	00.1	1	3	1	4	06	07	006440
83 Lebanon	065	05.7	01.0	4	1	4	3	12	08	002680
84 Lesotho	007	01.5	00.2	4	2	4	2	00	02	001276
85 Liberia	018	01.1	01.2	4	1	3	2	00	00	001734
86 Libya	036	02.4	06.8	6	3	5	3	04	08	002760
87 Luxembourg	013	01.2	00.5	1	1	1	1	00	00	000365
88 Tunisia	025	03.7	01.2	5	2	3	3	01	06	006250
89 Turkey	118	03.6	02.8	3	1	5	4	03	02	042110
90 Uganda	080	06.5	00.4	7	1	8	3	10	12	012500
91 Soviet Union	176	11.8	02.7	6	3	3	5	03	10	262436
92 Malaur	049	02.1	00.1	6	1	3	2	00	00	005450
93 United Kingdom	045	04.9	01.2	1	1	2	4	08	08	056700
94 United States	053	06.1	02.0	1	1	2	5	08	08	218630
95 Uruguay	063	02.0	02.5	6	1	3	5	00	00	002840
96 Venezuela	022	01.7	01.1	2	2	4	3	01	01	013090
97 Vietnam	372	26.5	03.0	7	2	4	5	10	10	048090
98 Malaysia	046	05.6	01.7	3	1	3	3	00	00	012995
99 Mali	061	04.7	00.1	7	1	5	2	00	00	006140
100 Malta	007	01.3	05.7	2	1	1	2	03	00	000332
101 Mauritania	142	07.1	03.1	6	1	5	4	00	08	001430
102 Mauritius	001	00.1	0.10	4	1	1	1	00	00	000925
103 Mongolia	079	95.8	05.5	7	1	3	2	00	00	001580
104 Mozanbique	162	02.4	00.6	7	1	4	3	00	01	009870
105 Nepal	043	01.0	00.3	5	1	1	2	00	00	013480
106 Nicaragua	077	02.0	01.0	5	1	4	3	04	03	002380
107 Niger	016	00.8	00.0	6	2	5	3	00	01	005193
108 Norway	039	03.6	02.1	1	3	2	4	02	00	004075
109 Oman	604	30.7	04.6	6	1	2	3	00	00	000837
110 Pakistan	197	05.3	01.9	5	1	5	4	00	08	073430
111 Papua-N. Guinea	016	01.6	00.2	2	1	3	3	05	00	002500
112 Paraguay	070	02.1	01.5	5	3	5	3	00	00	002870
113 Peru	169	03.1	01.6	4	2	5	3	02	00	017070

Nation and Code Number	Defense Exp. as % of Exp. for Health & Educ.	Defense Expenditures as % of GNP	Active Mil. Pers. as % of Econ. Active Population	Censorship	Method of Recruitment	Involvement of Mil. in Politics	Mil. Structural Orientation	Conflict Values 1978	Conflict Values 1979	Pop. 1978 (000)
114 Poland	100	03.0	01.7	5	2	3	4	00	00	034050
115 Portugal	047	03.3	01.5	2	3	4	4	06	00	009110
116 Qatar	051	02.5	04.6	5	1	2	2	00	06	000205
117 Rumania	102	01.8	01.5	6	3	3	4	00	00	021670
118 Rwanda	050	01.6	00.2	5	1	5	2	00	00	004520
119 Saudi Arabia	192	17.4	02.5	6	1	3	4	03	06	007730
120 Senegal	040	02.8	00.3	3	2	8	3	01	06	004750
121 Sierra Leone	016	01.0	00.2	5	1	3	2	00	00	002820
122 Singapore	158	05.4	03.6	5	3	3	4	01	01	002375
123 Somalia	188	13.8	04.2	7	1	8	4	11	01	003430
124 Spain	038	01.9	02.4	3	3	4	4	01	01	036690
125 Sudan	011	04.0	00.9	5	1	4	3	02	06	019120
126 Surinam	013	01.0	01.0	2	1	2	2	01	00	000400
127 Syria	440	15.8	10.5	6	2	4	5	02	06	008110
128 Tanzania	059	04.8	00.4	6	2	3	4	11	12	016520
129 Thailand	075	04.1	01.0	4	2	4	3	10	10	046390
130 Togo	027	92.8	00.3	6	1	5	2	00	01	002460
131 Trinidad & Tobago	005	00.3	00.2	2	1	3	2	00	00	001133
132 United Arab Emir	159	08.6	02.9	5	1	2	3	00	06	000875
133 Upper Volta	087	03.4	00.6	3	1	4	2	00	01	006510
134 Yemen, South	236	11.2	04.7	7	3	4	4	03	10	001830
135 Yemen, North	183	05.3	02.0	5	2	5	4	09	10	007270
136 Yugoslavia	044	05.5	02.9	5	3	3	4	01	01	021950
137 Zaire	107	03.5	00.3	6	1	4	3	08	02	027080
138 Zambia	112	08.4	00.7	5	1	3	3	06	06	005400
139 Madagascar	034	02.8	00.3	5	2	2	5	00	00	008090

BIBLIOGRAPHY

Boulding, Kenneth E. Conflict and Defense. New York: Harper & Raw, 1963. (HC 106.5 B38).

Brodie, Bernard. War and Politics. New York: Macmillan Publishing Co., Inc. 1973. (JX 1391 B68).

Cantori, Louis J. and Spiegal, Steven L., eds. The International Politics of Regions. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1970. (JX 1395 C295).

Chourci, Nazli and North, Robert C. "Dynamics of International Conflict: Some Policy Implications of Population, Resources, and Technology." World Politics. Volume 24, Spring 1972, pp. 80-122.

Copley, Gregory R., et. al., eds. Defense & Foreign Affairs Handbook 1978. London: Copley & Associates, S.A., 1978. (UA 10 D3 1977/1978).

Deadline Data on World Affairs. Greenwich, Conn.: McGraw-Hill Publications.

Deutch, Karl W. The Analysis of International Relations, Second Edition. Englewood Cliffs: Prentice-Hall, 1978. (JX 1291 D4 1978).

Donovan, James A. Militarism, U.S.A. New York: Charles A. Scribner's Sons, 1970 (UA 23 D6).

Dupuy, Trevor N., COL (Ret.), Hayes, Grace P., and Andrews, John A., COL (Ret.), eds. The Almanac of World Military Power, 4th Edition. San Rafael, California: Presidio Press, 1980. (UA15 D85 1980).

Eberwein, Wolf-Dieter, et.al. "External and Internal Conflict Behavior Among Nations, 1966-1967." Journal of Conflict Resolution, Volume 23, December 1979, pp. 715-742.

Eide, Asbjorn, and Thee, Marek, eds. Problems of Contemporary Militarism. New York: St. Martin's Press, 1980 (U2.2 P65).

Fact on File. New York: Facts on File, Inc.

Finer, S.E. The Man on Horseback. New York: Praeger, 1962 (JC 494 F5 1962).

Garson, G. David. Handbook of Political Science Methods. Boston: Holbrook Press, Inc., 1971 (JA 73 G24).

Gutteridge, William. The Military in African Politics. London: Methuen & Co., Ltd., 1969 (DT 31 G8).

Gutteridge, William. Military Institutions and Power in the New States. New York: Praeger, 1965 (UA 10 G81).

Hansen, David G., MAJ. Militarism and Foreign Conflict Behavior. Unpublished Thesis, University of Texas at El Paso, 1972.

Huntington, Sameul P. Political Order in Changing Societies. New Haven: Yale University Press, 1968.

Janowitz, Morris. The Military in the Political Development of New Nations. Chicago: University of Chicago Press, 1964. (U 21.5 J3).

Kegley, Charles W., et. al., eds. International Events and the Comparative Analysis of Foreign Policy, 1975 (JX 1291 I 47).

Keegan, John. World Armies. New York: Facts on File, Inc., 1979. (UA 15 W67 1979).

Keesing's Contemporary Archives. London: Keesing's Publications, Limited.

Liebknecht, Karl. Militarism and Anti-Militarism. New York: Howard Fertig, 1969.

Lockard, Duane. The Perverted Priorities of American Politics. New York: The Macmillan Co., 1971 (JK 261 L6).

Mack, Andrew. "Numbers are Not Enough: A Critique of Internal/External Conflict Behavior Research." Comparative Politics, Volume 7, July 1975, pp. 597-618.

McDonald, Donald. "Militarism in America." The Center Magazine. Volume 3, January/February 1970, pp. 12-33.

McGowan, Patrick J. and Shapiro, Howard B. The Comparative Study of Foreign Policy. Beverly Hills: Sage Publications, 1973 (JX 1291. M282.

The Military Balance 19XX-19XX. London: International Institute for Strategic Studies, 19XX (UA 15 I5 19XX/XX).

Mueller, John E., ed. Approaches to Measurement in International Relations. New York: Merideth Corp., 1969.

The New York Times Index 19XX. New York: The New York Times Company, 19XX.

Nie, Norman H., et. al., eds. Statistical Package for the Social Sciences, 2d Edition. New York: McGraw-Hill, 1975 (HA 33 S68 1975).

Organski, A.F.K. and Kugler, Jack. The War Ledger. Chicago: University of Chicago Press, 1980 (U 21.2 O73).

The Oxford English Dictionary. London: Oxford University Press, 1933 (Ref. PE1625 M7 1933).

Polsby, Nelson W., Dentler, Robert A., and Smith, Paul A., eds. Politics and Social Life. Boston: Houghton-Mifflin Co., 1963 (JA71 P6).

Price, Robert M. "A Theoretical Approach to Military Rule in New States." World Politics, Volume 23; April 1971, pp. 399-431.

Pruitt, Dean G. and Snyder, Richard C., eds. Theory and Research on the Causes of War. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969 (JX1291 T45).

Rummel, Rudolph J. "Dimensions of Conflict Behavior Within and Between Nations." General Systems (Yearbook of the Society for General Systems Research), Volume 8, 1963, pp. 1-50.

Rummel, R.J. The Dimensions of Nations. Beverly Hills: Sage Publications 1972 (JX1291 R85).

Rummel, Rudolph J. Understanding Conflict and War. Volume 1: The Dynamic Psychological Field. New York: John Wiley & Sons, 1975 (JX1291 R8 V.1).

Rummel, Rudolph J. "Understanding Factor Analysis." Journal of Conflict Resolution, Volume II, December 1967, pp. 444-480.

Russett, Bruce M. "Measures of Military Effort." The American Behavioral Scientist, Volume 7, February 1964, pp. 26-29.

Russett, Bruce M., ed. Peace, War and Numbers. Beverly Hills: Sage Publications, 1972 (JX 1291 R86).

Singer, J. David. "The 'Correlates of War' Project: An Interim Report and Rationale." World Politics, Volume 24, January 1972, pp. 243-270.

Singer, J. David, ed. Quantitative International Politics. New York: The Free Press, 1968 (JA74 S5).

Sivard, Ruth Leger. World Military and Social Expenditures 1981. Leesburg, VA: World Priorities, 1981 (UA17 S59 1981).

Smith, Clagett G. ed. Conflict Resolution: Contributions of the Behavioral Sciences. Notre Dame: University of Notre Dame Press, 1971 (JX1291 S54).

Spanier, John. Games Nations Play, 3d ed. New York: Holt, Rinehart and Winston, 1978 (JX1391 S73 1978).

Tanter, Raymond. "Dimensions of Conflict Behavior Within and Between Nations, 1958-1960." Journal of Conflict Resolution, Volume 10, March 1966, pp. 41-73.

Toynbee, Arnold J. War and Civilization. New York: Oxford University Press, 1950 (U21 T6).

U.S. Arms Control and Disarmament Agency. World Military Expenditures and Arms Transfer 1969-1978. Washington: Government Printing Office, 1980 (UA17 U31 1969-1978).

Vincent, Jack E. "Factor Analysis as a Research Tool in International Relations." Unpublished paper delivered at Sixty-fifth Annual Meeting of the American Political Science Association, 2-6 September 1969.

Vincent, Jack E. "Internal and External Conflict: Some Previous Operational Problems and Some New Findings." Journal of Politics, Volume 43, February 1981, pp. 128-142.

Webster's New World Dictionary of the American Language. College ed. Cleveland: The World Publishing Company, 1959.

Weinstein, John M. A Vector Analytic Approach to International Systems Conflict. Unpublished Ph. D. dissertation. University of Florida, 1978.

Wilkenfeld, Jonathan, ed. Conflict Behavior & Linkage Politics. New York: David McKay Co., Inc., 1973 (JX1291 W49).

Wright, Quincy. A Study of War, abridged by Louise Leonard Wright. Chicago: The University of Chicago Press, 1964 (U21 W7 1965).

Wycoff, Theodore. "The Role of the Military in Latin American Politics." Western Political Quarterly, Volume 13, September 1960, pp. 745-763.

Year Book of Labour Statistics 19XX. Geneva: International Labour Office, 19XX (HD4826 I5 19XX).

DISTRIBUTION

DCSOPS
Department of the Army
ATTN: DAMO-ZA
Washington, DC 20310

Director, Strategy, Plans and Policy
ATTN: DAMO-SS
Room 3E530, The Pentagon
Washington, DC 20310

ACSI
Department of the Army
ATTN: DAMI-ZA
Washington, D.C. 20310

US Army Concepts Analysis Agency
ATTN: Librar
8120 Woodmont Avenue
Bethesda, MD 20014

Commander
US Army Intelligence Threat Analysis
Detachment
Arlington Hall Station
400 Arlington Boulevard
Arlington, VA 22212

Defense Technical Information Center
510 Duke Street
Cameron Station
Alexandria, VA 22314

The Army Library (ARNRAL)
ATTN: Army Studies Section
Room 1A534, The Pentagon
Washington, DC 20310

Chief
Studies Analysis and Gaming Agency
Room 1D940, The Pentagon
Washington, DC 20301

Central Intelligence Agency
ATTN: Library
Washington, DC 20505

Deputy Director for Intelligence and
External Affairs
Defense Intelligence Agency
Room 2D921, The Pentagon
Washington, DC 20301

US Army Institute for Military Assistance
ATTN: Library
Fort Bragg, NC 28307

END 9-82